

OFFSHORE OIL: ITS IMPACT ON TEXAS COMMUNITIES

Volume I Executive Summary



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OFFSHORE OIL: ITS IMPACT ON TEXAS COMMUNITIES

U. S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
2234 SOUTH HOBSON AVENUE
CHARLESTON, SC 29405-2413

VOLUME I EXECUTIVE SUMMARY

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Texas Coastal Management Program
General Land Office of Texas
Bob Armstrong, Commissioner



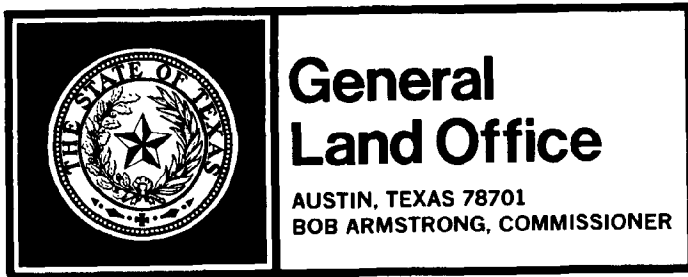
prepared by

Research and Planning Consultants, Inc.
Austin, Texas
June, 1977

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April 25, 1977

The Honorable Dolph Briscoe
Governor, State of Texas
State Capitol Building
Austin, Texas 78711

Dear Governor Briscoe:

I am pleased to forward for your consideration, this analysis of the onshore impacts of Outer Continental Shelf (OCS) development on the Texas coast. This report is one of several special studies conducted by my office as a part of the Texas Coastal Management Program.

Texas bears a major share of the burden of satisfying the nation's energy needs. Indicators point toward greatly increased activity in the Texas Federal OCS in the near future. This activity will benefit many coastal communities, but not without cost. The objective of this study is to enable state and local governments to avoid the economic, social, and environmental detriments of OCS development.

Toward this end, this study:

1. Presents a tested methodology for estimating the impacts of future OCS development on Texas cities and counties;
2. Provides OCS development scenarios to acquaint public and private decision-makers with the potential onshore impacts of OCS activities on their areas of responsibility;
3. Provides an analysis of current federal programs to compensate state and local governments for the fiscal deficits OCS development will cause in Texas.

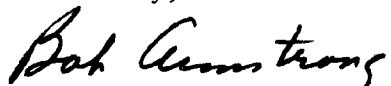
Governor Dolph Briscoe

April 25, 1977

Page 2

I believe this report contains findings, procedures, and analyses which will prove valuable to the people of Texas as development off the coast of Texas progresses. I hope it will assist you in fashioning the state's position on national energy policy.

Yours truly,

A handwritten signature in cursive script that reads "Bob Armstrong".

Bob Armstrong, Commissioner
General Land Office

enclosure

CONTENTS

VOLUME I: EXECUTIVE SUMMARY

		Page
Chapter 1	Introduction	1
Chapter 2	Study Approach	11
	Scenarios	11
	Analyses of Special Economic Sectors	13
Chapter 3	Organization of the Study	15
Chapter 4	Findings	19
	Scenarios	19
	Aggregate State Impacts	25
Chapter 5	Relevant Legislation	29
	Introduction	29
	Impact Aid Precedents	29
	Coastal Zone Legislation	30
	Background	30
	CZMA of 1972	30
	1974 Amendments to CZMA	31
	1976 Amendments to CZMA	32
	The Coastal Energy Impact Program	34
	Proposed Alternatives to CEIP	35
	Recent Actions	36
Chapter 6	Common Methodological Errors	39
Chapter 7	Major Policy Variables	53
Chapter 8	Conclusions and Recommendations	57
	Conclusions	57
	Recommendations	59

ACCOMPANYING VOLUMES

VOLUME II Local Impact Scenarios

Part A	Scenario Descriptions
Part B	Analysis of Scenarios
Part C	Scenario I
Part D	Scenario II
Part E	Scenario III
Part F	OCS Development: A Sociocultural Portrait of a Small Community

VOLUME III Aggregate State Impacts

Chapter 1	Introduction and Summary
Chapter 2	Refining
Chapter 3	Gas Processing
Chapter 4	Drilling Rig Construction
Chapter 5	Platform Construction
Chapter 6	Petrochemical Plants
Chapter 7	Storage Facilities

VOLUME IV Appendices

Appendix A	Study Methodology
Appendix B	Reasonable Ranges for Location and Extent of OCS Oil and Gas Development in the Texas Gulf of Mexico
Appendix C	Descriptions of Strikes
Appendix D	Industry Practices
Appendix E	The OCSOG Model
Appendix F	Estimating Fiscal Costs
Appendix G	Survey of Selected Modeling Techniques
Appendix H	Inventory of Existing Facilities
Appendix I	Anthropological Methods and Perspectives for Developing Community Profiles
Appendix J	Bibliography

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Project Manager:	Frank Sturzl
Principal Researchers:	Alan Dutton Ann Orzech Jean O'Brien Krausse Leah Pagan

Research and Planning Consultants, Inc. Principals:

President:	Ron Jones
Vice-President:	Ron Luke
General Counsel:	Jep Hill

ADDITONAL RESEARCH PARTICIPANTS AND ASSISTANTS

Richard N. Adams	Maria Henesch
Mike Agar	Ken Henneman
Harvey Banks	Bob Hill
Audie Blevins	Carolyn Honea
Harry Bradley	Lawanna Katz
Wayne Brown	Brenda Kirk
Pat Burke	Larry Lippke
Rick Burleson	Bill Longley
Kathleen Cloutier	John Macklin
David Fox	Polly McGlew
Parker Frisbie	W. "Red" Oliver
Jimmy Goodwin	Daniel Price
William Haffelder	Andy Reed
Sheryl Harding	Pat Wiles

FOREWORD

The citizens of the coastal region of Texas are among those most immediately affected by oil and gas development in the Gulf of Mexico. Residents of coastal communities will be interested in the effects of such development on their communities, and decision makers will be in need of the relevant information and assessment techniques that would allow for the recognition and amelioration of specific effects.

Attempts have been made in the past to calculate the impacts of outer continental shelf (OCS) development with simple formulae. The problem, however, is too complex for such an approach. Impact assessment does not lend itself to simple solutions.

This report attempts to bridge the gap between a sophisticated computer analysis of impacts and a readily employed "quick look" at likely impacts. Fiscal effects on impacted communities, for example, have been formulated on pages 52-57 of Volume II. The determination of social, environmental, land use, water and other impacts cannot be made so simply. This report presents a process by which such determinations can be made, and that process can be used in the future as a guide to the analysis of specific OCS oil and gas activities in specific areas.

The volumes in this study provide an extensive data base. For example, the employment, land use, water use, tax revenue, government service cost, population, and other factors associated with incremental increases of OCS activities are given. So are reasonable ranges for production in the OCS, an inventory of existing facilities, a description of industry practices, and much more. All of this data and the impact processes in which they are employed should be of great use to the local decision maker.



1. INTRODUCTION

The extraction of underwater oil and gas reserves is not a new activity. In its most primitive form it began in the 19th century. Since that time, exploitation of marine hydrocarbon resources has been facilitated by an advancing technology, increasing energy demand and diminishing onshore energy supplies, and legal developments clarifying ownership. Increased activity on the United States Outer Continental Shelf (OCS) generated growing concerns about the onshore and nearshore impacts - beneficial or adverse - of these activities. This study addresses those concerns.

The competing claims of the states and nation to offshore hydrocarbon resources were resolved only recently. The first offshore oil well was drilled from a pier extending into Santa Barbara Channel long before any attempts were made to define territorial rights to the OCS. That well, constructed in 1897, set off a rush for beach property in California, a search for submerged oil and gas deposits in other areas and a jurisdictional dispute which still exists today. By the late 1920's, offshore exploration for oil and gas had spread to the Texas and Louisiana portions of the Gulf of Mexico; and by the 1940's to Florida's waters. The issue of jurisdiction over submerged lands became more pressing.

The Truman Proclamation of September 28, 1945, declared that the "resources of the subsoil and seabed of the continental shelf" were property of the United States government. While the proclamation was undoubtedly made to clarify international issues, the implication for states was clear: they could not claim mineral resources in offshore areas. A Supreme Court decision later in the same year affirmed President Truman's proclamation; the federal government, the Court ruled, had rights to resources between the low tide mark and the three mile limit, the traditional boundary of a nation's offshore jurisdiction.

The territorial disputes had little effect on the rate at which offshore exploration and production progressed. In 1947, the first well out of sight of land was drilled offshore of Louisiana in 20 feet of water in the Ship Shoal area of the Creole field.

1953 was a signal year in the history of OCS development. In that year, both the Submerged Lands Act and the Outer Continental Shelf Lands Act were passed. The Submerged Lands Act gave jurisdiction over the three-mile area to the states and specified that states' jurisdictions could extend beyond three miles if a different historical boundary could be shown to have existed. Thus, this act modified the Truman Proclamation within the three-mile area. The Outer Continental Shelf Lands Act assigned responsibility for managing and leasing the subsurface on the OCS seaward of the three-mile limit to the Department of the Interior. This Act can be seen as the basic policy instrument for development of OCS resources.

By the end of 1953, before any federal OCS lease sales had taken place, production of oil and gas from what was to become the federal OCS had reached over 1 million barrels and nearly 20 million MCF, respectively, with a combined production value of \$5,036,861 and a combined royalty value of \$967,892.

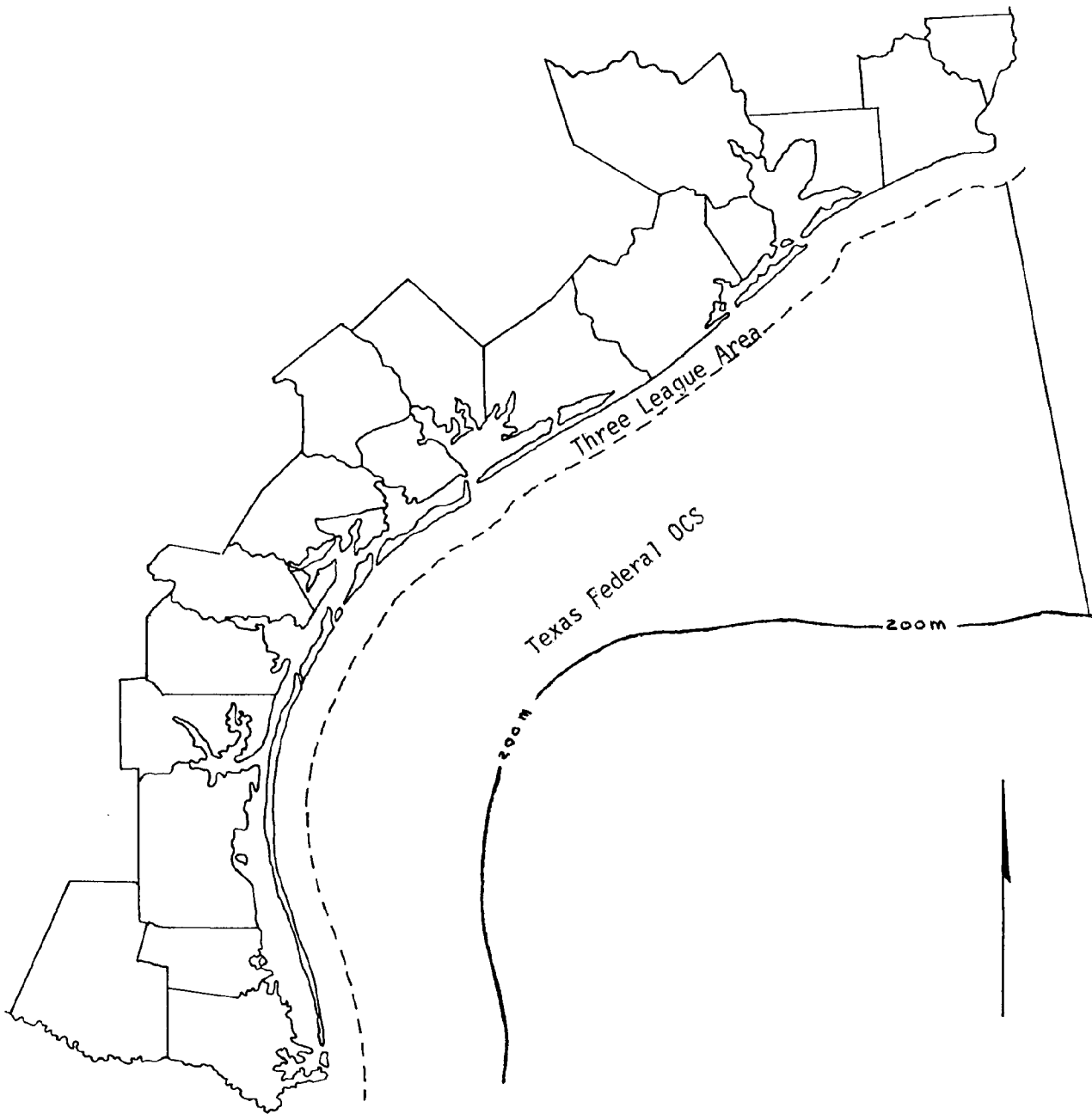
In accordance with the OCS Lands Act of 1953, the Interior Department held its first sale of OCS leases in October, 1954. In that first year, 114 leases involving nearly one-half million acres were let for a bonus in excess of \$140 million and at a first-year rental of nearly \$1.5 million. Federal OCS oil production in 1954 exceeded 3 million barrels and gas production was over 56 million MCF, for a total combined value greater than \$16 million. All well starts and completions were in the Federal OCS off Louisiana.

In 1958, the Geneva Convention on the Continental Shelf ruled that the term "continental shelf" referred to the seabed and subsoil seaward of the 3-mile limit to a point at which the sea depth is 200 meters or, beyond that point, to a point where sea depth will allow exploitation of resources. Thus, the U.S. federal OCS extends from the seaward limit of states' OCS to a point where sea depth is 200 meters and, in some cases, beyond.

In 1960, the United States Supreme Court held that Texas and Florida had satisfactorily demonstrated a claim to the OCS beyond the three-mile limit and have a boundary of three marine leagues (approximately 10.5 miles) from their Gulf of Mexico shorelines. Thus, the Texas Federal OCS, the geographical area which is the focus of this study, extends from the three-league line (three leagues from the shoreline) of Texas, to the 200-meter depth line, as established by the Geneva Convention of 1958. (See Map 1.) During the same year, the Department of the Interior awarded 148 federal OCS leases encompassing over 700,000 acres; bonuses that year topped the \$282 million mark. Production of oil was nearly 50 million barrels; production of gas was 273 million MCF. The value of such production was over \$254 million. Over 99% of the 1255 federal OCS wells in 1960 were in waters adjacent to Louisiana. Development has been limited primarily to the traditional areas. As recently as 1974, all federal OCS production has come from submerged lands surrounding Louisiana, Texas, or California.

In 1975, the Supreme Court ruled that the federal government has territorial jurisdiction beyond the three-mile limit for all submerged lands of 13 Atlantic coast states. That decision began a conflict over the propriety of oil and gas exploration and production in the Atlantic Ocean, a frontier area in terms of mineral extraction. The impetus for exploiting the potential mineral reserves in the Atlantic is twofold: (a) the shortage of domestic energy availability results in an increasing dependence on the importation of foreign oil and gas, and the Atlantic potential is seen as a step in the direction of energy independence; and (b) the East Coast accounts for almost 60% of the nation's total consumption of hydrocarbon

Map 1
Texas Federal OCS



resources while bearing only 15% of the nation's refining capacity; advocates of tapping the Atlantic's potential emphasize the East Coast's dependence on other sections of the U.S. for energy supplies, and for bearing the costs of OCS development. The most promising areas are the Georges Bank (off Cape Cod), the Baltimore Canyon trough (off Delaware), and the Southeast Georgia Embankment and Blake Plateau (both off the Southern Atlantic Coast).

Activity in the federal OCS off Texas, while historically much less than in the Louisiana OCS, is significant and is increasing. The U.S. Department of Interior has awarded approximately 580 leases in the Texas Federal OCS; nearly 400 are still in effect. Almost 20% of all awarded leases and over 20% of all leased acreage since 1954 has been Texas Federal OCS submerged lands. Map 2 shows the tracts into which the Texas Federal OCS is divided for leasing purposes and indicates which tracts are currently leased.

As of January, 1977, there were approximately 76 fixed platforms in the Texas Federal OCS; sixteen more were being planned for the High Island Areas alone. Annual oil production in 1975 was 426,508 barrels of oil and condensate and 101,434,765 MCF of gas and casinghead gas.

Recent events seem to indicate an acceleration of leasing in all federal OCS lands, an ongoing interest in the Gulf of Mexico OCS, and an increasing interest in the Texas Gulf of Mexico in particular.

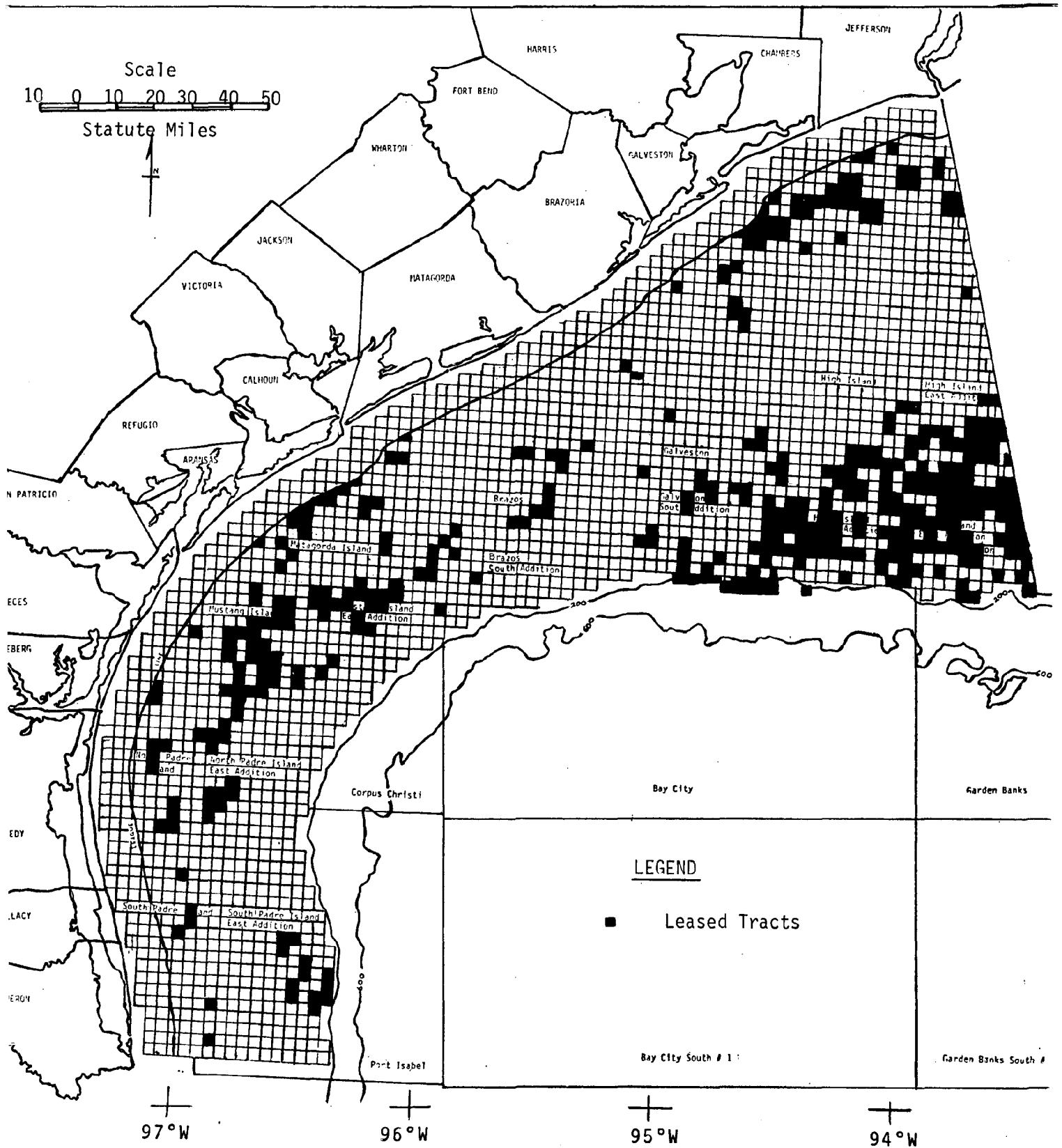
The acceleration of leasing activities generally is well documented by a survey of the history and current trends of leasing of federal OCS lands. The United States Geological Survey records indicate that during the 16-year period from 1954 until 1969, twenty lease sales were held, and 1,454 oil and gas tracts were leased. Between 1970 and the end of 1976, nineteen sales were held and 1,181 tracts were leased - all in a 7-year period. Further, the Proposed OCS Planning Schedule (Figure 1) released by the Bureau of Land Management in January, 1977, indicates that 23 sales are proposed for the 1977 to 1980 period.

Throughout the history of the leasing program, interest in Gulf of Mexico (particularly Louisiana) tracts has remained high. Of the 39 oil and gas lease sales which had taken place by the end of 1976, 32 involved Gulf of Mexico tracts. In addition, the Leasing Schedule released in January, 1977, revising a June, 1975 schedule, includes four additional Gulf of Mexico sales which had not previously been proposed.

The acceleration of leasing in general and the continuing importance of Gulf of Mexico tracts have been accompanied by a third trend: growing interest in Texas Federal OCS tracts in particular. In the 16-year period between 1954 and 1969, 214 Texas Federal OCS tracts were leased; between 1970 and 1976, that number climbed to 368, for a total of 582 leased tracts to date.

Map 2

Tracts in the Texas Federal OCS



January 1977
(Revises June 1975 Schedule)



DEPARTMENT OF THE INTERIOR

U.S. DEPARTMENT OF THE INTERIOR

DEPARTMENT OF THE INTERIOR

Ernst Zerkland.
Director, Bureau of Land Management

C - Call for Nominations	P - Public Hearing	Sales are contingent upon technology being available for exploration and development. A decision whether to hold any of the lease sales listed will not be made until completion of all necessary studies of the environmental impact and the holding of public hearings, as a result of the environmental, technical, and economic studies employed in the decision making process, a decision may, in fact, be made not to hold any sale on this schedule.
D - Nominations Due	F - Final Environmental Statement	
T - Announcement of Tracts	N - Notice of Sales	
E - Draft Environmental statement	S - Sale	
1/ Sale May Conduct Sale	2/ Within 60 Foot Buffer or Technology Capability	

Figure 1

The tracts which were offered for lease in Sale #41 (February, 1976) and in Sale #44 (November, 1976) and those which are tentatively offered for lease in Sale #47 (April, 1977) and in Sale #45 (December, 1977) offer further evidence that interest in Texas Federal OCS tracts is growing. (See Figure 2.) Of the 123 Gulf of Mexico tracts nominated for lease in Sale #45, for example, 47% are Texas Federal OCS tracts, the highest such percentage in recent Gulf of Mexico sales.

Figure 2
Recent and Proposed Gulf of Mexico Lease Sales

<u>Sale No.</u>	<u>Date</u>	<u>Description</u>	<u>Total No. Tracts Offered</u>	<u>Texas Federal OCS Tracts</u>	<u>Percentage of Total Tracts Offered</u>
41	Feb., 76	Gulf of Mexico (General)	132	30	23%
44	Nov., 76	Gulf of Mexico (Drainage)	52	7	11%
47*	April, 77*	Gulf of Mexico (Deep)	234**	36	16%
45*	Dec., 77*	Gulf of Mexico	123**	58	47%

* Proposed
** Tentative

SOURCE: USDI, BLM Tract Nominations Announcements

A composite description of leasing and exploration activities in the Texas Federal OCS can be seen in Figure 3.

Between the 1954-1967 time period and the 1968-1976 period, interesting trends developed. In terms of sheer amount of activity, there were large increases; number of sales, tracts offered, tracts leased, tracts explored, and tracts developed all increased dramatically. "Tracts leased as a percentage of tracts offered" dropped significantly, indicating that perhaps bidders have become more certain and therefore more selective. On the other hand, "tracts explored as a percentage of tracts leased" climbed by nearly 50%, again indicating, at least in part, more certainty on the part of bidders and explorers.

Figure 3
Texas Federal OCS Activities' Trends

Time Period		Measurements of Activity	% Change
1954-1967 (14 Years)	1968-1976 (9 Years/Through Sale #44)		
4	9	Number of Federal Lease Sales	+125%
204	1,445	Number of Tracts Offered	+608%
104	479	Number of Tracts Leased	+361%
50.9%	33.1%	Tracts Leased as a Percentage of Tracts Offered	-35%
40	*186	Number of Tracts Explored	+365%
38.4%	*56.2%	Tracts Explored as a Percentage of Tracts Leased	+46%
14	*49	Number of Tracts Developed	+250%

* Through Sale S1 (July, 1974) only. Tracts from subsequent sales have not been leased for a sufficient length of time to make accurate counts.

Sources: Offshore, June 20, 1976.

U.S.G.S Computer Printouts.

U.S.D.I BLM Final Environmental Statement Current Lease Status Maps
(Sales 34, 37, 38, and 41).

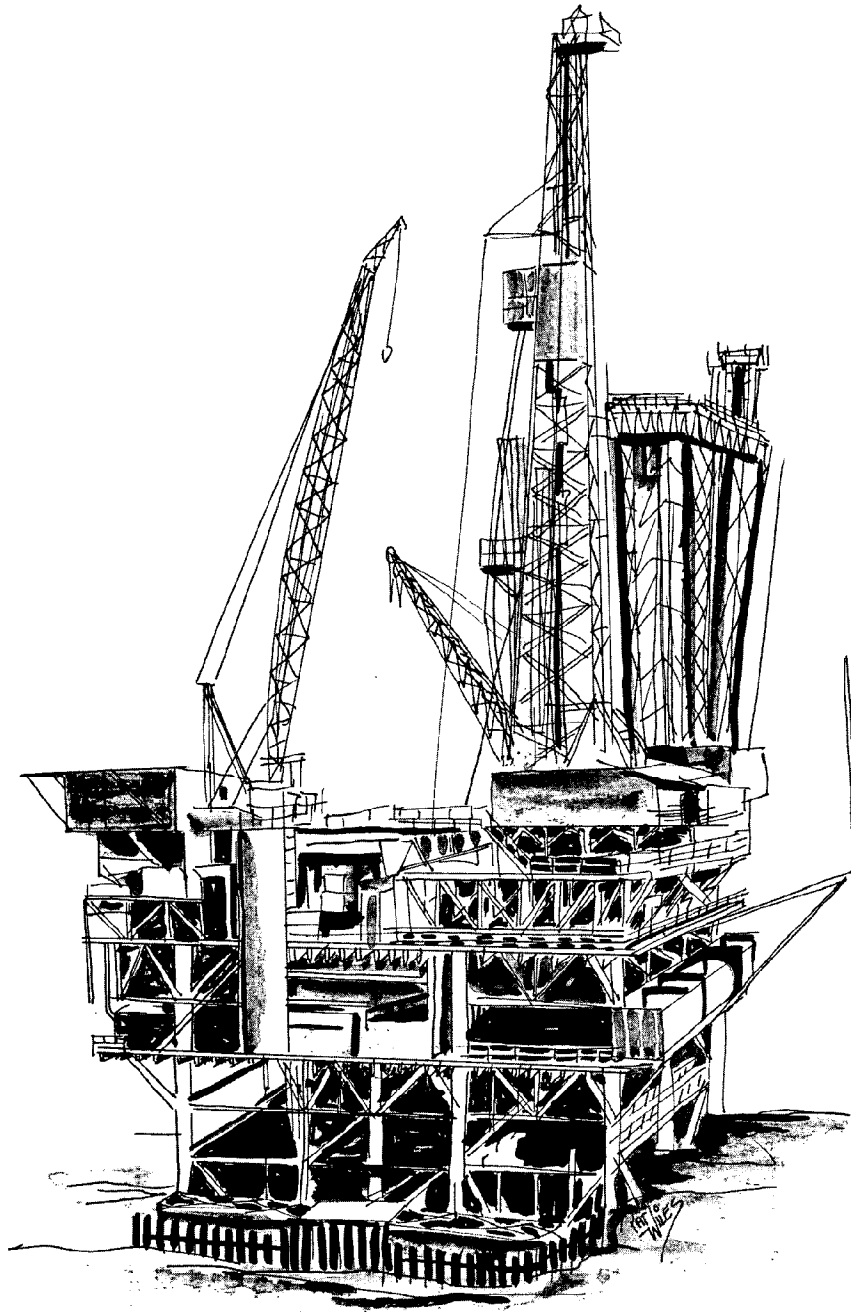
In part, of course, accelerated leasing was brought on by the series of events known as the energy crisis, by the resultant dependency on imported oil and gas, and the growing efforts toward national energy independence. Irrespective of the cause or causes of such acceleration, the fact that leasing has been accelerated raises at least two questions:

1. Is there a link between accelerated leasing and accelerated exploration, development, and production in leased tracts?
2. What are the nearshore and onshore impacts associated with oil and gas production from such leases?

The first question is answered in part by Title 43, Section 3302.2 of the Code of Federal Regulations. The CFR specifies that "all oil and gas leases shall be issued for a term of 5 years and so long thereafter as oil and gas may be produced from the leasehold in paying quantities, or drilling or well reworking operations as approved by the Secretary...are conducted thereon." Thus it can be seen that at the end of five years from the date of lease, the leased tract must be producing paying quantities of oil and/or gas or must be undergoing other drilling activities deemed, by the Secretary of the Interior, to be sufficient cause for extension of the lease.

That regulation directly ties accelerated leasing to accelerated exploration, development and production activities, if it is assumed that leaseholders will, at the minimum, explore the tracts before the five-year deadline. Because of the growing interest in Texas Federal OCS tracts in recent years (described above), the "five year" regulation takes on added meaning for Texas. The number of Texas Federal OCS tracts awarded in Lease Sale #31 (June, 1973) and in the seven subsequent sales to date totals 368. In addition, 36 tracts are tentatively offered for Sale #47 and 58 for Sale #45; a sizeable percentage of those are likely to ultimately be leased. In any event, it is reasonable to expect that approximately 400 Texas Federal OCS tracts are currently in some stage of development or will be by 1982. Even if each of those 400 tracts is not explored (assuming that poor results from exploratory drilling in one tract will discourage exploratory drilling in adjacent tracts), activity in the Texas Federal OCS in the near future can still be expected to significantly exceed past and present levels.

The second question posed above concerns the impacts of such offshore activities on the nearshore and onshore areas of Texas. It implies a need to determine the effects - beneficial or adverse - of such activities on economic systems - both public and private - and on environmental, infrastructural, and sociocultural systems of the State and of specific coastal communities of Texas. It is that question which this study attempts to answer.



2. STUDY APPROACH

An assessment of the onshore impacts of OCS oil and gas development can take many forms. It can, for example, be a series of case studies of previously impacted areas. Such a study may include a list of issues which the experiences of the case study sites indicate are important. Or an impact study could attempt to predict future OCS activity and thus provide a basis for estimating employment, housing and other requirements. Such a study could concentrate on any or all of dozens of types of impacts: public or private; national, state, regional, or local; environmental, economic, or fiscal, and so on.

This study includes parts of all the approaches mentioned above - and more. It employs basically two techniques:

1. Analyses of three distinct OCS oil and gas production scenarios. Each scenario is unique in its offshore strike location, its time frame for activities, its employment and equipment requirements, and so on. All scenarios were analyzed in terms of their economic, fiscal, infra-structural, environmental and social impacts. The scenario analyses include land, employment, water, and public service requirements as well as calculations of personal income, expenditures and tax revenues.

2. Analyses of special economic sectors which may not feel the effects of any given scenario in isolation, but may be impacted by all potential Texas Federal OCS oil and gas activity taken together. Included, among others, are petroleum refining and mobile rig construction.

In general, the policy objectives of this study were to develop a methodology which isolates potentially significant issues for affected jurisdictions and to analyze those issues in terms of their timing and magnitude.

Scenarios

An OCS Scenario is a postulated development sequence including pre-lease sale exploration, the lease sale, exploratory drilling, development, production, and amounts of oil and/or gas produced.

Three scenarios were developed. The scenarios and the strike areas which comprise them together represent a broad range of locations; types and amounts of equipment required for exploration, development, and production; time periods of development; and amounts and types of production.

It is equally important to know what the scenarios are not: they are not predictions of oil and gas activities. They are, instead, postulations which were used for the purpose of determining the impacts of postulated activities if they were to actually occur. If the postulated activities of a scenario do not, in fact, take place at the postulated time, or in precisely the postulated location, the study of the impacts of such activities is not invalidated; it is only the date of commencement of activities which requires adjustment. The process which has been developed to isolate and analyze impacts and, to a great extent, the descriptions of the specific impacts themselves, are still useful.

In short, while scenarios were developed with the aid of analyses of past events and standard industry practices, they must not be seen as predictions upon which the success of this part of the study rests. They are, instead, reasonable postulations from which the study can proceed.

A methodology relying on prediction would be questionable. The process of scheduling lease sales, conducting them, carrying out exploration, and developing reserves is surrounded by uncertainties. Decisions to schedule sales and offering tracts for leasing are made in the public sector and are subject to all the uncertainties of any policy process. The same can be said of decisions to award leases after bids are made and of any regulations pertaining to exploration and development activities.

Nominating leases for sales; decisions to bid on which tracts and how much to bid; time tables for exploring, developing, and producing; and many other decisions are made in the private sector and, again, are subject to a wide array of uncertainties. Here, any or all of the uncertainties surrounding any investment decision come in to play.

Finally, even if public and private policy were certain and known, nature does not always cooperate. The best geologic evidence of economic quantities of OCS oil or gas can be positively verified only by exploratory drilling; the results may - and, on occasion, have - run counter to geologic expectation.

Given these uncertainties and given that scenarios can only hope to be postulations, the process of analyzing scenarios takes on added significance. That is, if the events postulated do not occur the process of calculating impacts of scenarios must be transferable to actual, future events. The effort to develop such a process was a primary objective of the study. The results, can be found in Appendix A, "Study Methodology" and in Volume II, Part B, "Analysis of Scenarios."

The foregoing precautions should not be taken to mean that scenarios are unrealistic. Every effort was made to develop scenarios which are reasonably likely to occur. Appendices B,C, and D document the geologic, engineering and policy assumptions of the scenarios. However, while the three scenarios are, to varying degrees, likely to occur, no claim of certainty is made.

Each scenario describes offshore events; the resultant activities, requirements, effects, and impacts were then traced to the onshore sites most likely to be involved. That approach differs significantly from those studies which defined an onshore study area and then described the offshore development which could impact that site and what the impacts would be. It was felt that for purposes of this study the approach which traces the impacts of likely offshore events to whichever onshore sites are most likely to feel impacts is more closely attuned to actual events than is an approach which starts by isolating an onshore study site and traces activity to offshore areas.

The description of impacts of each scenario was guided by an attempt to bridge the gap between highly sophisticated, computer-oriented assessment procedures and processes which are manageable by local policy makers who may or may not have ready access to computer facilities and large staffs. The "Local Fiscal Impact Assessment" in Volume II, Part B, is one example of the results of that attempt.

Analyses of Special Economic Sectors

There are, of course, some economic sectors which could not be reasonably expected to feel any impacts from one scenario in isolation (scenarios being limited to certain offshore areas), but may experience impacts when all potential development in the Texas Federal OCS in the near future is analyzed in the aggregate. The economic sectors include petroleum refining, gas processing, mobile rig construction, platform construction, petrochemical processing, and petroleum storage facilities.

Each of those sectors was examined in terms of the likelihood of their being impacted by Texas Federal OCS oil and gas operations, what those impacts may be, and to what extent those impacts may be felt. Those analyses can be found in Volume III, "Aggregate State Impacts".



3. ORGANIZATION OF THE STUDY

The report is divided into four volumes. The following is an outline of each volume.

Volume I	Executive Summary
	Chapter 1 Introduction
	Chapter 2 Study Approach
	Chapter 3 Organization of the Study
	Chapter 4 Findings
	Chapter 5 Status of Relevant Legislation and Regulations
	Chapter 6 Common Methodological Errors
	Chapter 7 Major Policy Variables
	Chapter 8 Conclusions and Recommendations
Volume II	Local Impact Scenarios
Part A	Scenario Descriptions
Part B	Analysis of Scenarios
	Chapter 1 Introduction
	Chapter 2 Methodologies B,C, and D: Exploration, Development, and Production
	Chapter 3 Methodology E: Net Onshore Effects
	Chapter 4 Methodology F: Environmental Impact Assessment
	Chapter 5 Methodology G: Social Impact Assessment
	Chapter 6 Summary
Part C	Scenario I
	Chapter 1 Introduction and Summary
	Chapter 2-16 Calculation of Impacts
	Chapter 17 Impact on Region I: Orange and Jefferson Counties
	Chapter 18 Impact on Region II: Harris, Galveston and Chambers Counties
	Chapter 19 Impact on Region III: Brazoria County

Part D

Scenario II

Chapter 1	Introduction and Summary
Chapter 2-16	Calculation of Impacts
Chapter 17	Impact on Region VI: San Patricio and Nueces Counties
Chapter 18	Impact on Region VII: Cameron, Hidalgo, and Willacy Counties

Part E

Scenario III

Chapter 1	Introduction and Summary
Chapter 2-16	Calculation of Impacts
Chapter 17	Impact on Region IV: Matagorda, Calhoun, Jackson, and Victoria Counties
Chapter 18	Impact on Region V: Aransas and Refugio Counties
Chapter 19	Impact on Region VI: San Patricio and Nueces Counties

Part F

OCS Development: A Socio-
cultural Portrait of a Small
Community

Volume III

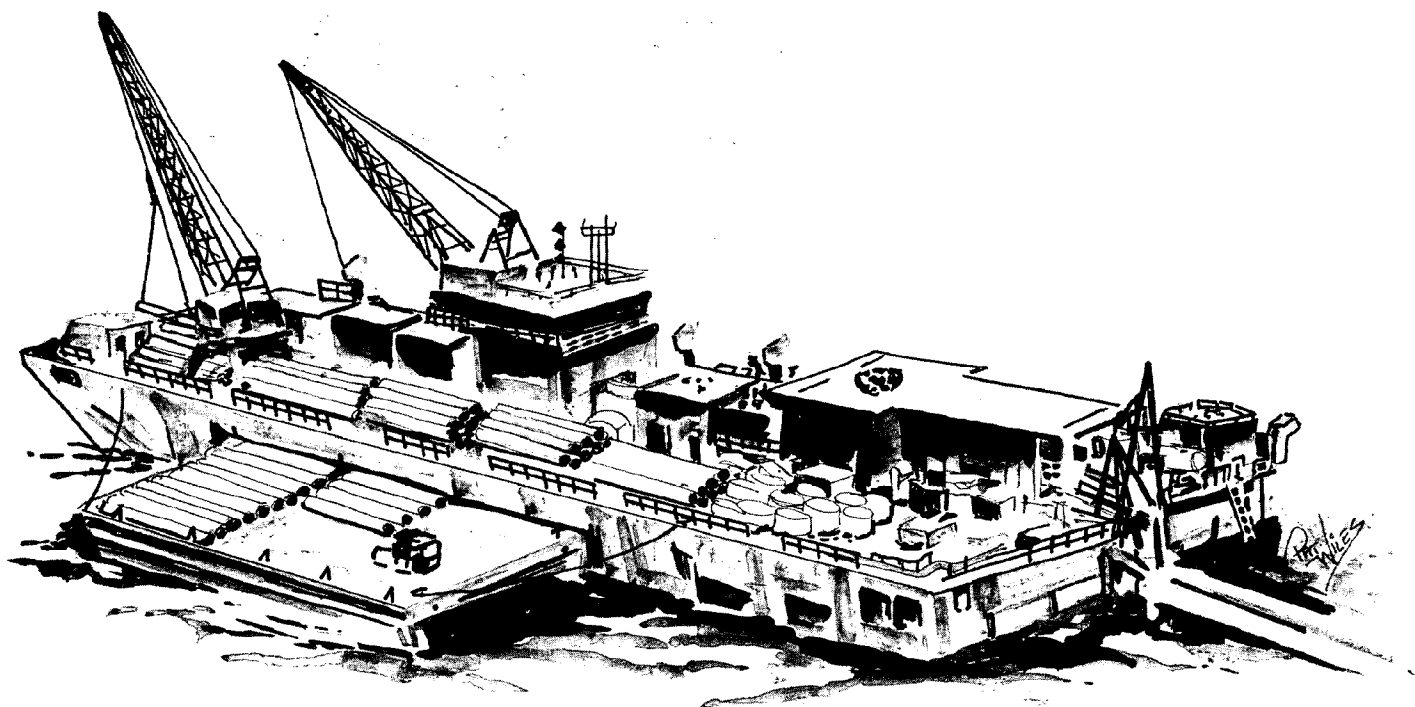
Aggregate State Impacts

Chapter 1	Introduction and Summary
Chapter 2	Impact of Capacity Increases in Texas Refining Industry
Chapter 3	Effects of OCS Develop- ment on Gas Processing Sector
Chapter 4	Impact of OCS Developm- ent on the Offshore Exploratory Drilling Rig Construction Sector
Chapter 5	Impact of OCS Develop- ment on the Fixed Plat- form Fabrication Sector
Chapter 6	Impact of OCS Oil and Gas Development on Petro- chemical Plants
Chapter 7	Impact of OCS Develop- ment on Petroleum Storage Facilities

Volume IV

Appendices

Appendix A	Study Methodology
Appendix B	Reasonable Ranges for Location and Extent of OCS Oil and Gas Develop- ment in the Texas Gulf of Mexico
Appendix C	Descriptions of Strikes
Appendix D	Industry Practices
Appendix E	The OCSOG Model
Appendix F	Estimating Fiscal Costs
Appendix G	Survey of Selected Modeling Techniques
Appendix H	An Inventory of Existing OCS Related Oil and Gas Facilities in Texas
Appendix I	Anthropological Methods and Perspectives for Developing Community Profiles
Appendix J	Bibliography



4. FINDINGS

Scenarios

I. Scenario I

Scenario I postulates OCS development in a 39-tract area located in the southernmost portion of the High Island East Addition South Extension Area and the northernmost portion of the Garden Banks Area. The Scenario postulates that:

1. Between the present time and May 1977, a total of 21 tracts will be leased;
2. Twelve of the 21 tracts will undergo exploratory drilling;
3. A maximum of four drilling rigs will be in use at any one time;
4. Seven tracts will undergo development drilling;
5. Eleven platforms will be installed on those seven tracts;
6. A total of 119 development wells will be drilled from those eleven platforms;
7. All seven of the developed tracts will be put into production, and the eleven development platforms will be producing platforms;
8. Three of the eleven platforms will be outfitted with production equipment;
9. There will be one undersea completion; and
10. Peak production will be 297 million MCF of gas annually.

The scenario analysis results in estimated requirements of 2579 direct employees, 388 acres of land, and 9200 feet of docking space. The peak demand period is estimated to be the sixth year after exploratory drilling commences.

The requirements for Scenario I activities are expected to be met in Region I (Orange and Jefferson Counties), Region II (Harris, Galveston, and Chambers Counties), and Region III (Brazoria County). In the peak demand period, 303 direct employees, 87 acres of land, and 600 feet of docking space will be required in the Orange/Jefferson area. In the Harris/Galveston/Chambers area, 1638 direct employees, 287 acres of land, and 7000 feet of docking space will be required. The figures for Brazoria County are 122 direct employees, 8 acres, and 1600 feet of docking space.

The Orange/Jefferson area requirements are likely to be met in Beaumont, Port Arthur, and Sabine Pass; the Harris/Galveston/Chambers requirements in Houston and Galveston; and the Brazoria County requirements in Freeport.

When all projected primary and indirect requirements are included, the requirements on the Orange/Jefferson area are estimated to be 224 acres of land; 217.8 acre-feet of water; 149 resident employees, 181 new resident employees, and 15 commuters, for a total of 345; 489 new residents; 166 new housing units; and 123 new students.

In the Harris/Galveston/Chambers area the requirements are projected to be 858 acres of land; 1,656.1 acre-feet of water; 1023 resident employees, 1132 new resident employees, and 33 commuters, for a total of 2188; 3050 new residents; 1039 new housing units; and 770 new students.

For Brazoria County, the figures are 92 acres of land; 84.65 acre-feet of water; 32 resident employees and 98 new residents for a total of 130; 265 new residents; 90 new residents; 265 new residents; 90 new housing units; and 67 new students.

Business expenditures are expected to total over \$20 million in Region I, nearly \$164 million in Region II, and \$12.5 million in Region III. Personal income should total nearly \$7 million in the Orange/Jefferson area, almost \$90 in the Harris/Galveston/Chambers area, and \$2.4 million in Brazoria County.

Fiscal deficits are expected to occur in the local governmental entities of all three regions. The State government, on the other hand, is expected to realize a net revenue/cost surplus.

No significant environmental effects are expected in Region I or in Region III. In Region II (Harris/Galveston/Chambers), however, wastewater loadings and air quality are potentially significant environmental concerns.

In Region I, Beaumont may experience a shortage of recreational facilities; and in Port Arthur, sewage collection is a potentially significant infrastructural issue.

In Houston, recreational facilities and educational services are seen as potentially significant areas; in Galveston, sewage collection is so categorized. No potentially significant issues were isolated in Freeport.

In short, fiscal impacts are expected to be the most noticeable impacts of Scenario I in each of the three affected regions.

II. Scenario II

Scenario II postulates OCS development in a 32-tract area located in the southernmost portion of the South Padre Island Area and the easternmost portion of the South Padre Island East Addition Area. The Scenario postulates that:

1. Between the present time and May, 1977, a total of 11 tracts will be leased;
2. Nine of the 11 tracts will undergo exploratory drilling;
3. A maximum of three drilling rigs will be in use at any one time;
4. Five tracts will undergo development drilling;
5. Seven platforms will be installed on those five tracts;
6. A total of 59 development wells will be drilled from those seven platforms;
7. All five of the developed tracts will be put into production, and seven development platforms will be producing platforms;
8. Two of the seven platforms will be outfitted with production equipment;
9. There will be no undersea completions; and
10. Peak production will be 640,000 BBLs of oil per year and 72 million MCF of gas annually.

The Scenario analysis resulted in projected requirements of 1,727 direct employees, 240.5 acres of land, and 6,000 feet of docking space. The peak demand period is projected to be the seventh year after exploratory drilling begins.

The requirements for Scenario II activities are expected to be met in Region VI (San Patricio and Nueces Counties) and Region VII (Cameron, Hidalgo, and Willacy Counties). In the peak demand period, 315 direct employees, 67 acres of land, and 1,000 feet of docking space will be required in the San Patricio/Nueces area. In the Cameron/Hidalgo/Willacy area, 951 direct employees, 168 acres of land, and 4,600 feet of docking space will be required.

The San Patricio/Nueces area requirements are likely to be met in or near Ingleside, Corpus Christi, and/or Harbor Island; the Cameron/Hidalgo/Willacy area requirements in or near Brownsville and/or Pt. Isabel.

When all projected primary and indirect requirements are included, the requirements on the San Patricio/Nueces area are projected to be 167 acres of land; 70.25 acre-feet of water; 191 resident employees, 237 new resident employees, and 29 commuters, for a total of 457; 640 new residents; 218 new housing units; and 161 new students.

In the Cameron/Hidalgo/Willacy area the requirements are projected to be 400 acres of land; 209.53 acre-feet of water; 427 resident employees, 786 new resident employees; and 33 commuters for a total of 1,246; 2,122 new residents; 721 new housing units; and 535 new students.

Business expenditures are expected to total over \$48 million in Region VI and over \$102 million in Region VII. Personal income is projected to approach \$26 million in Region VI and to exceed \$54 million in Region VII.

Fiscal deficits are projected to occur in the local governmental entities of both regions. However, Scenario II activities are expected to result in a net benefit for the State government.

In Region VI, wastewater effluent loadings and air quality were isolated as potentially significant environmental issues. In Region VII, demand for industrial, commercial, and residential land; wastewater effluents; and air quality were isolated.

No significant social impacts are projected for Region VI, but Region VII could experience social impacts due to shortages in public services, increased competition for land, and maldistribution of economic benefits.

In Region VI, Corpus Christi could experience a shortage in educational facilities. In Region VII, Brownsville may experience shortages of housing and educational services; Pt. Isabel may have a shortage of housing, recreational and health facilities.

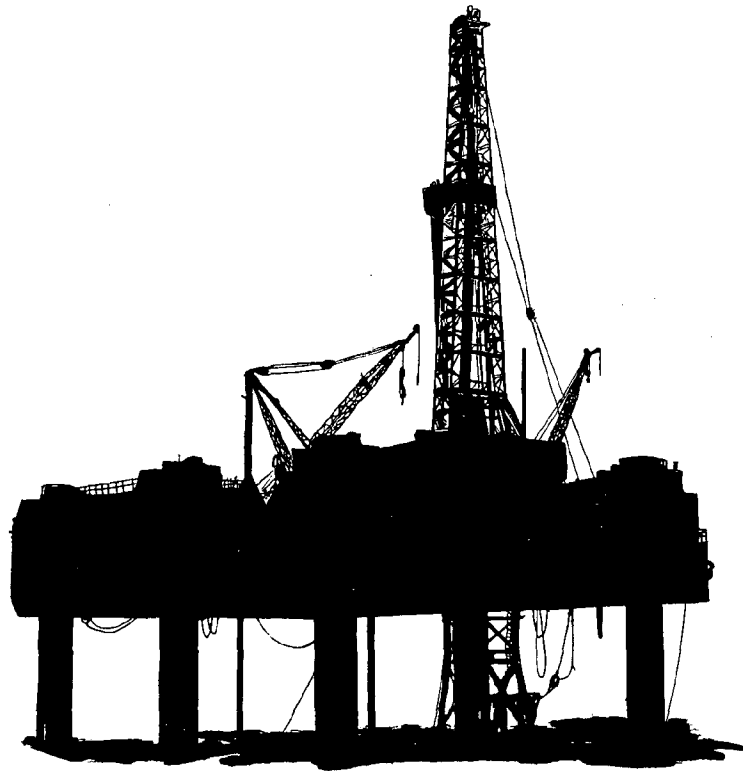
III. Scenario III

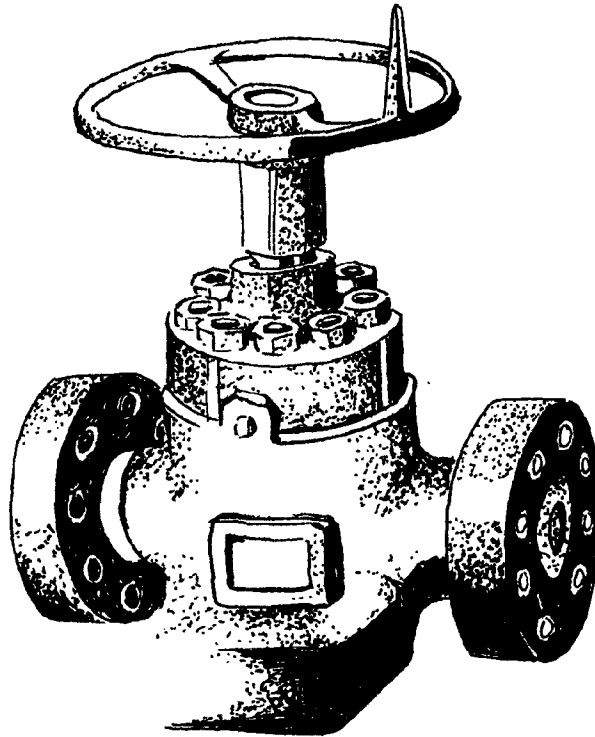
Scenario III postulates OCS development in a 32-tract area located partially in the Brazos South Addition Area and partially in the Mustang Island East Addition Area. The Scenario postulates that:

1. Between the present time and May, 1977, a total of 17 tracts will be leased;
2. Twelve of the 17 tracts will undergo exploratory drilling;
3. A maximum of four drilling rigs will be in use at any one time;

4. Six tracts will undergo development drilling;
5. Nine platforms will be installed on those six tracts;
6. A total of 84 developments wells will be drilled from those nine platforms;
7. All six of the developed tracts will be put into production, and nine development platfroms will be producing platforms;
8. Two of the nine platforms will be outfitted with production equipment;
9. There will be no undersea completions; and
10. Peak production will be 205.5 million MCF of gas annually.

The Scenario analysis results in estimated requirements of 2296 direct employees, 321.5 acres of land, and 7400 feet of docking space. The peak demand period is estimated to be the sixth year after exploratory drilling commences.





The requirements for Scenario III activities are expected to be met in Region IV (Matagorda, Jackson, Calhoun, and Victoria Counties), Region V (Aransas and Refugio Counties), and Region VI (San Patricio and Nueces Counties). In the peak demand period, 565 direct employees, 141.5 acres of land, and 1000 feet of docking space will be required in the Matagorda/Jackson/Calhoun/Victoria area. In the Aransas/Refugio area, 205 direct employees, 9.5 acres of land, and 2600 feet of docking space will be required. The figures for the San Patricio/Nueces area are 892 direct employees, 164 acres, and 3600 feet of docking space.

The Matagorda/Jackson/Calhoun/Victoria area requirements are likely to be met in Port O'Connor, Port Lavaca, Bay City, and Victoria; the Aransas/Refugio area requirements in Rockport; and the San Patricio/Nueces area requirement in Ingleside, Corpus Christi, and Aransas Pass.

When all projected primary and indirect requirements are included, the requirements on the Matagorda/Jackson/Calhoun/Victoria area are estimated to be 414.5 acres of land; 378.05 acre-feet of water; 204 resident employees, 344 new resident employees, and 48 commuters, for a total of 596; 929 new residents; 316 new housing units; and 234 new students.

In the Aransas/Refugio area the requirements are projected to be 266.5 acres of land; 347.93 acre-feet of water; 84 resident employees, 155 new resident employees, and 33 commuters, for a total of 272; 419 new residents; 142 new housing units; and 106 new students.

For the San Patricio/Nueces area, the figures are 413 acres of land; 941.79 acre-feet of water; 424 resident employees, 566 new resident

employees, and 51 commuters, for a total of 1,041; 1,528 new residents; 520 new housing units; and 385 new students.

Business expenditures are expected to total over \$27 million in Region IV, over \$27 million in Region V, and more than \$145 million in Region VI. Personal income should total over \$10 million in the Matagorda/Jackson/Calhoun/Victoria area, nearly \$15 million in the Aransas/Refugio area, and over \$51 million in San Patricio/Nueces area.

Fiscal deficits are expected to occur in the local governmental entities of all three regions. The State government is also expected to incur net deficits.

Increased demand for land, land use conversions, possible secondary effects of residential land development, solid waste disposal in Calhoun County, and air emissions are potentially significant environmental issues facing Region IV. In Region V, land use conversions, possible secondary effects of residential development, increased return flow wastewater volume and effluent loadings, and atmospheric emissions are potentially significant environmental issues. For Region VI, air and water quality are such issues.

Rapid population growth, competition for housing and land, potential shortages of public services, and a changing economic base are sources of social impacts in both Region IV and Region V. No serious social impacts are expected in Region VI.

In Bay City, housing and recreational facilities have been isolated as potentially significant infrastructural issues; in Victoria, recreation and educational facilities were so flagged; in Port Lavaca, recreational facilities; and in Port O'Connor, incorporation as a city, sewage collection and treatment, housing, solid waste disposal, and traffic patterns are such issues. (Port O'Connor is somewhat unique, and impacts on it - particularly social impacts - are dealt with separately in Part F of Volume II.)

In Rockport, only educational services was isolated as a potentially significant infrastructural issue. In Corpus Christi, educational services were so identified; and in Aransas Pass, housing, sewage treatment, recreation, and education merit special attention.

Aggregate State Analysis

Volume III contains an analysis of large, capital-intensive sectors which are not likely to be affected by any scenario in isolation but which

may feel the affects of composite Texas Federal OCS oil and gas activity. The analysis of petroleum refining activities in Texas results in the conclusion that production from the Texas Federal OCS, in and of itself, is extremely unlikely to necessitate any expansion of the refining sector in Texas. Demand for refining capacity is more a function of demand for finished products than of supply of crude oil. It is also likely that future oil production from the Texas Federal OCS will offset - not be added to - the 1.4 million barrels per day of foreign crude oil which were input to Texas refineries in September, 1976.

When the overall energy supply situation is analyzed (rather than oil production from the Texas Federal OCS only), refining capacity expansion in Texas by 1985 could range from none to 1.7 million barrels per day, depending on the set of assumptions chosen. Accordingly, the impacts of expansion, in terms of income and State and local tax payments, vary widely. Chapter 2 of Volume III contains a thorough analysis of future expansions of the refining sector in Texas.

Chapter 3 of Volume III compares estimates of additional Texas Federal OCS gas production through 1985 with existing capacity and throughput of gas processing plants in the Texas coastal region. The results reveal that if an 80% utilization rate for gas plants is assumed, the anticipated increase in OCS gas production by 1985 would require only 10% of the current excess capacity in the region. The projected future production of OCS gas, then, can reasonably be expected to reverse the current downward trend in capacity utilization, but not to require, in and of itself, significant new capacity.

In Chapter 4 of Volume III, the impact of oil and gas activities in the Texas Federal OCS on the exploratory drilling rig construction sector is analyzed. The analysis suggests that while a surplus of mobile rigs appears to be the current case, demand will balance supply in the latter part of 1979. Moreover, it appears that if expansion were to be required in yard capacity, such expansion would probably not take place until the 1980's. Finally, it seems unlikely that Texas Federal OCS development in and of itself would warrant such capacity expansions.

The impact of oil and gas development in the Texas Federal OCS on the platform fabrication sector is analyzed in Chapter 5 of Volume III. In sum, the analysis concludes that since demand for fixed platforms is a derived demand based on such variables as rate of leasing, private investment decisions, and cost/price dynamics, any of dozens of future public or private policy decisions could seriously alter the present platform supply/demand picture. Given current trends, demand for platforms is likely to increase slightly in the near future leading most probably to minor capacity increases primarily in the form of expansions of existing facilities. Further, such expansions in existing facilities are most likely to take place in Louisiana, rather than in Texas.

Chapter 6 analyzes the impact of OCS oil and gas development on petrochemical plants. The analysis points out that petrochemical plants ultimately depend on refineries and gas plants for feedstocks. Thus, since it was concluded that oil and gas activity in the Texas Federal OCS is not likely to generate capacity expansions of refining or gas processing in Texas, Chapter 6 concludes that expansion of the petrochemical sector - due to Texas Federal OCS activity - is equally unlikely.

In Chapter 7, the impact of OCS oil and gas production of storage facilities is examined. Although existing, relevant data is very sketchy, the analysis concludes that storage facilities construction or expansion are unlikely to be undertaken simply due to Texas OCS production.



5. RELEVANT LEGISLATION

Introduction

The prospect of potential impacts on Texas coastal communities or on the State as whole from OCS oil and gas development certainly raises the question of available compensation. This chapter describes the legislative precedents for federal mitigative assistance to state or local jurisdictions impacted by federal activities or by private activities on federal lands, including the 1976 amendments to the Coastal Zone Management Act of 1972 which, in part, provide for financial assistance to mitigate the impacts of coastal energy activities. In order to place the 1976 amendments in the proper perspective, a short history of coastal zone legislation is included.

Impact Aid Precedents

There is a substantial body of federal legislation aimed at compensating localities for the local effects of federal actions. Of particular interest are the Mineral Land Leasing Act of 1920, the Lanham Act of 1940, the Defense Housing and Community Facilities and Services Act of 1951, and a number of acts passed in 1950.

The Mineral Land Leasing Act of 1920 provided that 37½% of royalties from federal mineral leases within individual states are paid directly to such states to be used for schools and roads. This Act marked the change from the practice of transforming federal lands into private lands (which made them available to local taxing authorities) to the practice of leasing federal lands to private individuals (thus rendering them unavailable to local taxing authorities).

The Lanham Act of 1940 and subsequent amendments provided that for persons engaged in national defense activities, the federal government could acquire land; construct housing; make grants for schools, waterworks, sewers, and other public facilities; and pay annual sums to states or political subdivisions in lieu of taxes on land acquired by the federal government. The Defense Housing and Community Facilities and Services Act of 1972 contains similar provisions.

Other federal impact legislation includes aid to local school districts burdened by federal activities. Among these Acts are 20 U.S.C. SS 236 et seq. and 20 U.S.C. SS 631 et seq. These two acts provide aid to local districts with children who reside on federal property, have a parent on active duty in the uniformed services, reside with a parent employed on

federal property, or whose attendance results directly from federal activities. Aid is also provided if the revenues available from local sources have been reduced as the result of acquisition of real property by the United States.

Coastal Zone Legislation

I. Background

Two studies were important in recognition of the fragility of the coastal zone and its importance to the United States. The Commission on Marine Science, Engineering, and Resources (the Stratton Commission) produced Our Nation and the Sea in 1969. This report called the coastal zone the "Nation's most valuable geographic feature" and called for effective management of the zone. It pointed out the role of the states and called for legislation to aid and encourage the coastal states in their efforts to manage the coastal zone. The National Estuary Study, completed by the Department of the Interior in 1970, was a thorough discussion of current conditions of the nation's estuaries and of the ongoing changes that were occurring. It was a major source of information in the process of the nation realizing that the estuarine areas of the nation were rapidly being changed.

II. Coastal Zone Management Act of 1972 (CZMA)

The widening awareness of the problems associated with the coastal zone of the United States created a stream of administrative and congressional actions. Shortly after the release of Our Nation and the Sea in 1969 by the Stratton Commission, coastal zone management bills were introduced in both the Senate and the House of Representatives. These 91st Congress bills differed in details but, in essence, proposed development grants for coastal zone management. Included were proposals to establish estuarine sanctuaries. The bills differed in the definition of the coastal zone and in the assignment of responsibility for management of the program. None of the 91st Congress bills became law.

During the 92nd Congress, coastal zone management bills were again introduced in both houses. After hearings, S. 3507 was passed by the Senate on April 25, 1972. H.R. 14146 was passed by the House of Representatives on August 2, 1972. The House-Senate conference report was passed by both the House and the Senate on October 12, 1972, and the President signed S. 3507, the Coastal Zone Management Act of 1972, into law as P.L. 92-583 on October 27, 1972.

The Coastal Zone Management Act of 1972 is actually an amendment to a 1966 act that established a National Council on Marine Resources and

Engineering Development and a Commission on Marine Science, Engineering, and Resources (80 Stat. 203) as amended (33 U.S.C. 1101-1124). The Act has three primary provisions in addition to the definitions and authorization of appropriations sections.

Section 305 authorizes the Secretary of Commerce to make annual management program development grants to any coastal state for up to 66 2/3% of the cost of development of a state coastal zone management program. It outlines the requirements of a coastal zone management program and places certain limits on federal funding. This section has funding authorization of \$9,000,000 per year for five years.

Section 306 authorizes the Secretary of Commerce to make annual grants of up to 66 2/3% of the cost of administering a state's approved coastal zone management program. This section has funding authorization for \$30,000,000 per year for each of four years.

Section 312 authorizes the Secretary of Commerce to make grants of up to 50% of the cost of acquisition, development, and operation of estuarine sanctuaries. This section has authorized funding of \$6,000,000.

Funding was appropriated in December, 1973, over a year after the bill was signed into law. Within the first year of implementation, 31 of the 34 states and territories eligible for grants had applied for and received grants under the Act. Only \$7,200,000 was appropriated for Section 305 grants while the states demonstrated needs were 40% in excess of available funding (Legislative History of the Coastal Zone Management Act of 1972). Of the first \$7,200,000 appropriated for Section 305 grants, Texas received \$360,000 as partial funding of a \$551,000 management development program (Legislative History).

Appropriations for fiscal year 1975 were \$12,000,000 of which \$9,000,000 were for Section 305; \$2,000,000 for Section 312; with the remainder for administrative expenses.

III. 1974 Amendments to CZMA

The Coastal Zone Management Act of 1972 achieved a substantial portion of its goals. Within a year of funding, most coastal states and territories eligible for development grants under Section 305 had obtained funding. In fact, the funding of Section 305 had proved to be inadequate to meet needs shown by the states. Section 306 administrative grants had not yet started, but certain technical problems were projected to occur in the early and late years of the program. Additionally, the Section 312 estuarine sanctuaries grants were slowly developing with an \$825,000 grant being made to Oregon. It was felt desirable to extend funding authorization through fiscal 1977 in order to allow more states to identify estuarine areas and to participate in this aspect of the program.

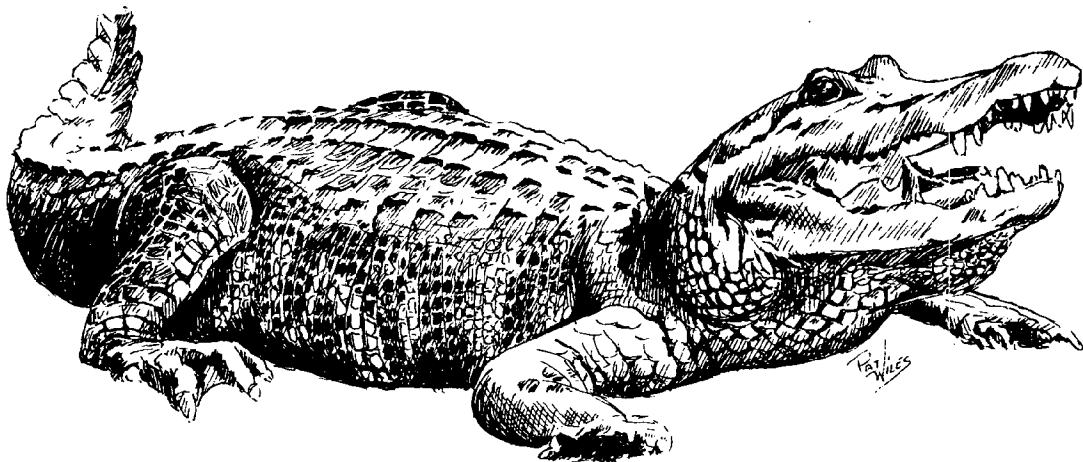
Finally, the energy crisis that developed in the United States had pointed out the need for effective management of energy related developments in order to obtain needed resources while minimizing undesirable environmental and economic side effects.

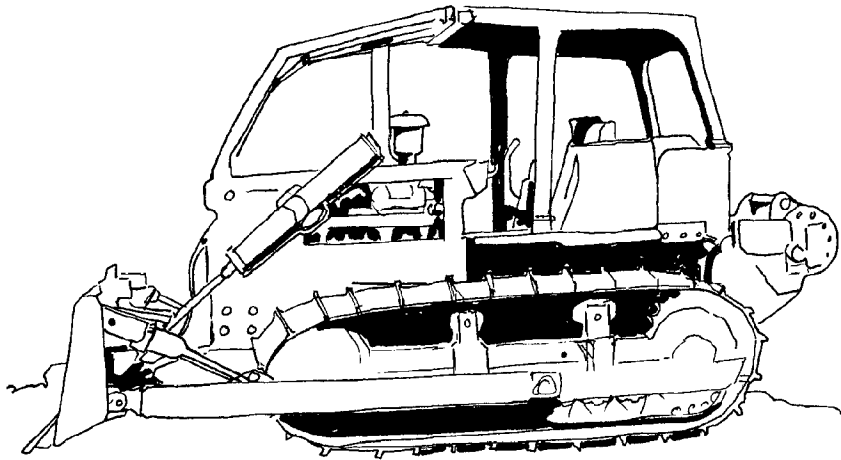
As a consequence of these needs, companion bills, H.R. 16215 and S. 3922, were introduced in 1974. They provided for an extension from fiscal 1977 through fiscal 1979 of the Section 305 development grants and an increase in the appropriations authorization from \$9,000,000 per year to \$12,000,000 per year for years subsequent to 1974.

The Section 306 administrative grants were extended from fiscal 1974 to fiscal 1979, and the terms under which they were to be granted were made more flexible.

The Section 312 estuarine sanctuaries grants had the appropriations authorization increased from \$6,000,000 for one year to \$6,000,000 for each of four years. Finally, the authorization for appropriation for administrative cost of the Act was extended for two years.

The House passed H.R. 16215 on December 18, 1974, and the Senate passed the same bill on December 19, 1974. The President approved the bill as P.L. 93-612 on January 2, 1975.





IV. 1976 Amendments to CZMA

By 1976 all of the coastal states and three of the four eligible territories had responded to the need for coastal zone management and were receiving grants under Sections 305 and 306 of the Coastal Zone Management Act of 1972. The Act, however, did not provide for the amelioration of onshore impacts caused by exploration and production of energy from the Federal OCS. Also, in 1975 the Supreme Court determined that the Federal Government had sole jurisdiction over development beyond the three-mile (in the case of Texas, three-league) limit, and consequently the coastal states would have no part in the decision process concerning development of energy resources on the Federal OCS. Additionally, the coastal states would not directly benefit from any lease bonuses or production royalties.

In recognition of these problems, bills were introduced in the House of Representatives and the Senate to amend the Coastal Zone Management Act of 1972. H.R. 3981 was introduced on February 27, 1975, and passed the full House on March 11, 1976. S. 586 was introduced on February 5, 1975, and passed the Senate on July 16, 1975. The two bills differed in details and appropriations authorizations.

Both bills provided for federal guarantees for state and local bonds for required public facilities and services. Both bills provided for

automatic annual payments to coastal states affected by OCS development; the methods of determining the payment amounts were different. The House bill tied the automatic grants to the proportions associated with each coastal state of the national totals of OCS leased acreage in that year, of wells drilled on the Federal OCS in that year, of production of oil and gas on the Federal OCS in that year, of oil and gas produced on the Federal OCS and landed in that year, of employment related to OCS development in that year, and on the OCS-related onshore capital investment made during that year. In the Senate bill, the annual payments were tied to the volume of OCS oil and gas produced and/or landed and the number of years that OCS development has been in progress. The House funded these annual payments at \$400 million spread over fiscal years 1977 through 1981. The Senate funded these payments at \$162.5 million for the three fiscal years ending September, 1978.

Additionally, both bills provided for discretionary grants or loans to states facing net adverse impacts from development of the Federal OCS or from energy facilities built in the coastal zone.

The two bills were submitted to the Conference Committee. The Conference Committee submitted its report on June 24, 1976. It was accepted by the Senate on June 29, 1976, and by the House on June 30, 1976. The President signed it into law as P.L. 94-370 on July 26, 1976.

The amendments modified the development and administrative grant sections to provide for 80 percent federal funding instead of 66 2/3 percent. Other sections of the law amend the federal consistency requirement to specifically apply to the basic steps in OCS leasing - the exploration, development, and production plans submitted to the Secretary of the Interior. The amendments also established the Coastal Energy Impact Program, the CEIP (Section 308). That program is particularly relevant to this study.

The Coastal Energy Impact Program

There are substantial differences between both the House and Senate versions of the 1976 amendments and what ultimately emerged as P.L. 94-370. Under P.L. 94-370, formula grants to coastal states are based on new OCS acreage leased, the volume of oil and gas produced on adjacent OCS, the volume of oil and gas produced from the OCS and landed in a state, and the amount of new employment resulting from new or expanded OCS energy activity. These grants are funded at \$400 million over eight years.

The bulk of federal impact assistance is in the form of loans to coastal states and local governments, federal bond guarantees and loan

repayment assistance awarded if a state or local government cannot meet its loan obligations for loans guaranteed under the Act. It also includes grants for study and planning and for prevention, reduction, or amelioration of unavoidable losses of environmental and recreational resources. This assistance is through the Coastal Energy Impact Fund, to be administered by the Secretary of Commerce. It is authorized \$800 million of funding. All reference to "net adverse impact" was deleted from the final version. This CEIP fund is managed by the Office of Coastal Zone Management under the Associate Administrator for Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Proposed regulations were published October 22, 1976. Interim-final regulations were published January 5, 1977, and became effective on February 4, 1977.

These regulations provide for the administration of the CEIP and the formula grants tied to OCS activity. The CEIP is intended to mitigate impacts caused by new or expanded coastal energy activity while the formula grants are to be used to meet needs resulting from OCS energy activity. Both types of activity are defined in the regulations.

The CEIP provides for assistance in the form of planning grants; financing of new or improved public facilities required due to new or expanded coastal energy development; repayment assistance to states or local governments; and grants to prevent, reduce, or repair damage to environmental or recreational resources. The fund is the primary source of federal aid for the first three of these needs and a secondary source for the last. The formula grants are the primary source of federal aid for the last need (grants to prevent, reduce, or repair damage to environmental or recreational resources) and the secondary source of funds for the other three types of need.

Proposed Alternatives to the CEIP

Prior to the passage of P.L. 94-370, numerous alternatives to the CEIP approach were proposed. The Ford Administration was supporting national land use legislation to aid the states in establishing management programs for areas of environmental concern.

The Mineral Land Leasing Act of 1920 aided states in which federal lands were located by providing for sharing of royalties received from the mineral leases on such lands. This form of revenue sharing was also proposed for OCS lands adjacent to the various coastal states. One of the primary disadvantages of this proposal was thought to be timing of money flows; the needs commonly occur during the development phase while, the royalties and consequent revenues typically occur later.

The concept of utilizing federal revenues for mitigation of net adverse impacts was included in both the Senate and the House bills. P.L. 94-370, as passed, implicitly assumes that the primary difficulty that state and local governments face as a consequence of OCS development is one of timing. That is, it was assumed that, in total, the net effects will be beneficial to the state and local governments. This assumption made by the conference committee may cause substantial hardship on selected localities.

Both the House and Senate bills and the law give small consideration to the effects that have already occurred as a consequence of past development of the Federal OCS. Some areas have had substantial impacts of past development and the very modest impact aid included in the law will be of only marginal aid in restoring these areas.

Finally, the interstate problems associated with OCS development is often recognized. A single state will not, in many cases of OCS development, include all of the onshore effects, but instead the effects will be spread unevenly over a group of neighboring states. This problem is recognized, and interstate compacts are allowed and encouraged under Section 309 of the 1976 Amendments. These grants are for planning and administration and may not get to the heart of the problem.

Recent Actions

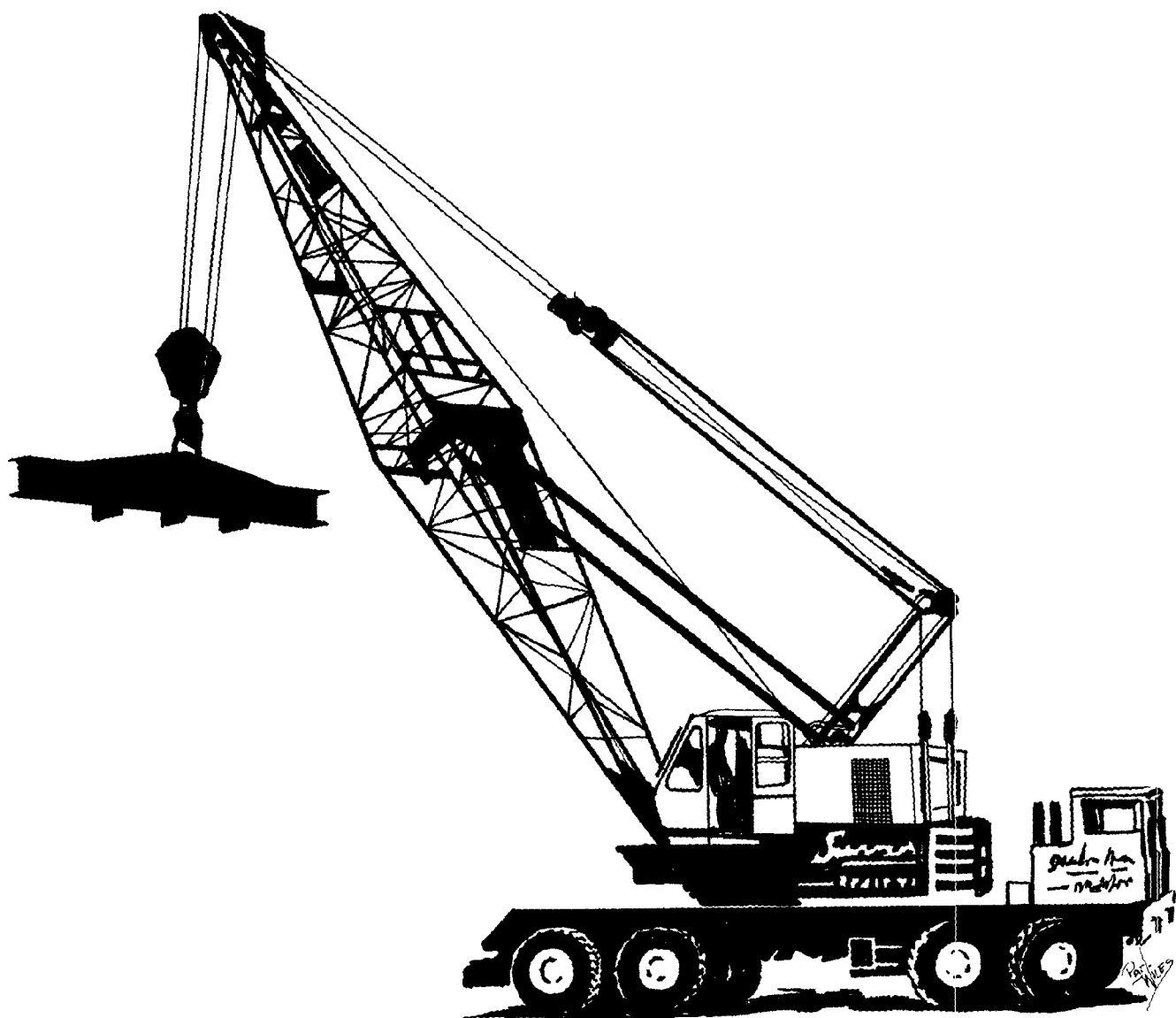
In March, 1977, the Office of Coastal Zone Management (OCZM) forwarded to the State of Texas a package of documents detailing the baseline data and the methods which OCZM proposed to use to make allotments of funds under the Coastal Energy Impact Program (CEIP). OCZM requested comments, suggestions, and notification of detected errors which could affect the size of Texas' allotment. OCZM requested that such information be forwarded on or before May 4, 1977.

In early April, 1977, the CEIP regulations were changed slightly in two ways: 1) a state can choose to use credit assistance funds for existing energy activities; and 2) the definition of "credit availability" was modified such that formula grants may be used for construction purposes.

On April 15, 1977, a team of federal regulators visited Texas for the purpose of demonstrating to concerned State and local officials the mechanics of the CEIP. At that time, it was expected that allocations would be made in May, 1977.

On April 4, 1977, Governor Briscoe designated the Office of the Governor as the responsible agency for allocating the State's share of

allocations under CEIP and for submitting applications and requisitions. The Budget and Planning Office was designated as the primary point of contact. Both designations were "interim," pending final actions by the Texas Legislature and additional study by State agencies.



6. COMMON METHODOLOGICAL ERRORS

Chapter 4 of this Volume indicates that the fiscal effects of OCS development on Texas coastal communities are likely to be quite pronounced. Comparable studies in other states have drawn a similar conclusion. OCS-generated fiscal effects are the result of a unique characteristic of Federal OCS activity: the equipment required to extract hydrocarbons in federal waters - rigs, platforms, pipelines, and more is beyond the taxing jurisdiction of State and local governments; but the people who operate that equipment consume government services just as they would if the equipment was onshore and taxable. While the onshore developments related to OCS activities generate tax revenues, coastal governments nevertheless incur service costs at a faster rate than they accrue revenue. This characteristic of OCS development has been sufficiently verified that the U.S. government, in the 1976 amendments to the Coastal Zone Management Act of 1972, established a Coastal Energy Impact Program which is in part intended to alleviate this tax revenue deficit. (See Chapter 5 of this Volume for an analysis of the Coastal Energy Impact Program.)

While the existence of a deficit is accepted as a general proposition, the methods used to calculate deficits for specific states and localities have often been questioned. In many cases, such questioning was justified. There are certain forecasting techniques, widely used in the past, which this study considered faulty and attempted to avoid. Some of these techniques are discussed below.

I. Identification of Impact Areas

The extent and timing of OCS-related onshore impacts must be determined for each OCS development and each coastal area. Generalizations will not usually be helpful. For example, a coastal area with existing offshore oil service industries, a high level of government services, an abundance of available housing, and a wealth of available land for industrial expansion, is likely to feel any adverse effects far less than a coastal area without these slack resources. It is unrealistic to select a coastal area, regardless of its likelihood of being affected by OCS activities, and to analyze the impacts on that area if any OCS activities were to ever affect it. Instead, this study began by analyzing the best available data to select the offshore areas which are most likely to be developed. Once tracts were selected, the personnel, supply, and equipment requirements of such developments were allocated to the coastal areas most likely to supply those requirements. (Part B of Volume II and Appendices B and C provide complete information on these processes.) This approach appears to more closely track the many corporate decisions which collectively result in "OCS development." This study proceeded from the

most likely offshore development sites to the onshore areas most likely to be affected, rather than from a selected onshore site to any offshore activity which could affect that site. Offshore development will undoubtedly take place in the most geologically promising locations, and equipment and supplies will be obtained from the onshore areas able to supply them most economically.

II. Origin-of-Employment

Having isolated the coastal areas which are most likely to be affected by a set of offshore activities and having calculated the number of workers required for those activities, it is necessary to determine how many of those workers already live in the affected site and are currently unemployed or will change jobs, how many will merely commute to the affected coastal area, and how many will actually move into the area and establish residences. Such a determination is critical to any subsequent calculation of fiscal effects. It would be faulty to assume that all required workers would be new residents or to assume that the percentage of workers who are new residents will be the same in all OCS activities and in all regions.

This report utilizes origin-of-employment percentages which vary by specific activity and by specific affected site. For each activity in each affected coastal area, the percentages of new resident workers, existing resident workers, and commuters are established. (See Part B of Volume II for further details.) Since the origin-of-employment percentages are based on particular activities and particular areas, the affected area's previous experience with offshore energy development and industrial activity in general and its unemployment level are extremely important. In a Texas coastal area which has extensive previous experience with offshore activities, the "new resident employment" percentage may be relatively high if that area traditionally has a low unemployment rate. The important point is that this study does not assume that all required workers will be new residents of the affected onshore site.

III. Calculation of Fiscal Effects

In addition to the questions of where impacts are likely to occur and how many new residents are likely to be involved, several other important ingredients are necessary for the determination of fiscal effects. Among them is the calculation of OCS-generated tax revenues. This study uses an input/output model to make such calculations. (See Part B, Volume II and Appendix E for discussions of this report's use of the input/output model.) A common methodological error in utilization of the input/output model to calculate tax revenues is to assume no direct tax payments due to OCS activity. That assumption is invalid. Onshore facilities include mud companies, diving companies, well logging firms, and many others which pay

taxes. Furthermore, the individuals residing onshore generate tax revenues. This report includes calculations of direct as well as indirect tax revenues of OCS activities. Some users of input/output models have also incorrectly assumed that the coefficients related to, for example, the drilling contracting sector, are the same for offshore and onshore activities. Thus, offshore modifications of the input/output model were used in this analysis (again, see Appendix E). Finally, use of a statewide model would implicitly assume that coefficients in the affected coastal area equal statewide coefficients. This study, therefore, uses sub-regional modifications of the state model (Appendix E). The practice of applying statewide or nationwide coefficients to a specific coastal area is further discussed below.

Besides tax revenues, the calculation of government costs associated with OCS development is required. In this report, government service costs are computed through use of a per capita model. (See Appendices F and G for a discussion of infrastructural cost models.) Per capita costs of local governments were calculated by including total expenditures of local governments with the study site minus intergovernmental transfers revenues.

State per capita costs in each affected coastal site were calculated by using only direct State expenditures.

Thus, when the tax revenues, as they are calculated in this study, are compared to per capita service costs, the fiscal effect of OCS activities, as a distinct set of activities, results.

It was mentioned above that several OCS impact studies, in addition to this one, have concluded that net fiscal deficits for affected local governments are likely to occur. There is one notable exception. "Fiscal Effects of OCS Oil and Gas Development and Deepwater Port Development," by Robert L. Bish of the Institute of Urban Studies in College Park, Md., appeared as Working Paper #6 in Volume II of Coastal Effects of Offshore Energy Systems: An Assessment of Oil and Gas Systems, Deepwater Ports, and Nuclear Powerplants Off the Coast of New Jersey and Delaware, published by the Office of Technology Assessment in November, 1976. The study began by noting that it had been done in a "very short time" using readily available data. The purpose of Working Paper #6 was "to estimate the fiscal contribution to state and local governments resulting from representative offshore developments." The introduction to Working Paper #6 adds that "certain assumptions are necessary." The study assumed that state and local per capita revenue raised from their own sources is equal to per capita expenditures from their own sources. The study proceeded with an attempt to determine "whether or not offshore developments result in greater or lesser revenue per person directly associated with those developments than the average per capita revenue raised from other economic activities in the state." Working Paper #6 used as its basic set of development assumptions a scenario for the development of the Baltimore Trough off New Jersey and Delaware and applied those same assumptions to

each of 23 coastal states. Those development assumptions included the eventual recovery of 1.8 billion barrels of oil and 5.3 trillion cubic feet of gas; 25 installed platforms, each with 24 producing wells, within 14 years of the first lease sale; extensive onshore pipeline rights-of-way, staging areas, and tank farms; and the construction of at least three gas processing plants - all directly due to OCS development.

The per capita state and local revenue for Texas in FY 1973-1974, according to the Bish study, was \$617. That figure was compared to OCS associated tax revenues (using the development assumptions, above) over 18 years of development. Until the third year, the analysis estimates, OCS-related per capita revenue is less than per capita revenue from other activities. But beginning in the fourth year, OCS-associated revenues far exceed other per capita revenues. The author therefore concludes that over the long term OCS development more than pays its own way.

Working Paper #6 contains serious methodological errors; some of those flaws were referenced in Volume I of the OTA study, the study for which Working Paper #6 was prepared. In Chapter II of Volume I, the study notes that the "principal reason" the OCS activities appear to pay their own way so handsomely in Working Paper #6 "is that the major onshore installations, such as tank farms and pipelines, are capital intensive, and therefore produce substantial sales and property tax revenues." And therein, of course, lies the major flaw in the Bish analysis. Volume III of this report demonstrates that OCS activity, in and of itself, is extremely unlikely to lead, in Texas, to gas plant construction, tank farm construction, or any of the other onshore, capital intensive activities which are the basis of the "net fiscal benefit" conclusions of Working Paper #6. Indeed, the development assumptions used by Bish include over \$500 million in taxable investments - none of which are likely to occur in Texas as a direct result of OCS activities. Texas has sufficient gas plant capacity, refinery capacity, and tank farm capacity to accomodate any production which can reasonably be expected to come from the Texas Federal OCS. Furthermore, an extensive network of pipelines, both offshore and onshore, already exists.

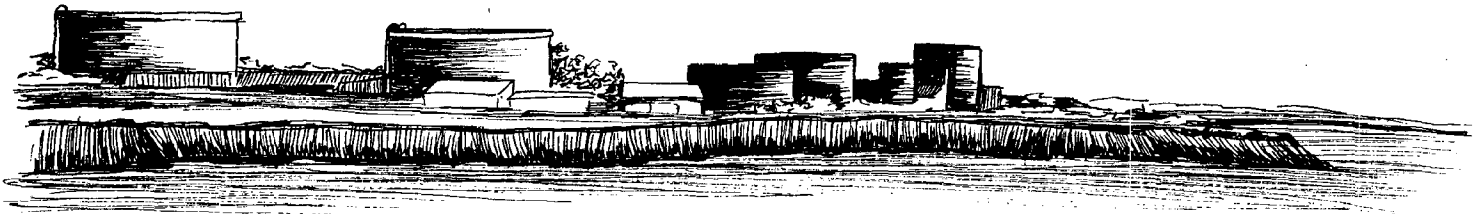
One could conceivably argue that the existence of such excess capacities indicates that Texas has already been the recipient of fiscal gains due to OCS activities. It is more reasonable to conclude, however, that the oil-and gas-related facilities in Texas, with the exception of offshore pipelines, would have been constructed to process Texas' extensive onshore production or imports, even without OCS development.

The importance to the Bish analysis of such extensive onshore, capital intensive construction activities cannot be overstressed. If such developments had been included in the analysis of this report, the fiscal analysis would undoubtedly have been far different. The set of onshore development assumptions, rather than the internal mechanics of any fiscal impact assessment, is the single most important determinant of the net fiscal effect of OCS development. It would be invalid to assume that New

Jersey and Delaware would not need to construct extensive onshore facilities because Texas doesn't. It is equally invalid to assume that Texas would need new onshore facilities to handle OCS production simply because New Jersey and Delaware would. The assumptions developed for Atlantic states to determine fiscal effects of OCS development cannot be transferred to Texas.

Working Paper #6 makes additional methodological errors which, in some cases, are common to such studies. While some have been alluded to above, they merit additional discussion.





1. The analysis proceeds from estimates of oil and gas production rather than expenditures for exploration, development and production. It ignores the possibility that activities could take place (and generate impacts) with little or no ultimate production. This situation occurs in the cases of dryholes, shut-in wells, or marginal fields.

2. The Bish analysis assumes that OCS-related costs in one state are offset by revenues from onshore development in the same state. Actual experience in Texas invalidates that assumption. An excellent example is two major pipelines now being constructed in the Texas Federal OCS: one to serve the northern High Island Area and one to serve the High Island South Addition and East Addition/South Extension Areas. Some of the pipeline workers will live in Texas. Both pipelines, however, will ultimately pump production to Louisiana. Thus, onshore pipelines, tank farms, or processing plants (to the extent they may be required) will undoubtedly be constructed in Louisiana.

3. Working Paper #6 assumes a decrease in population in the ninth year because of completed "construction" activities. Such a decrease is, in fact, not likely to take place if there had been no extensive new onshore construction or if offshore personnel simply move on to a new tract.

As noted above, Volume I of the OTA study advises the reader to accept with caution to conclusions of Working Paper #6, noting some "important qualifications to these conclusions:"

1. "In some States, OCS development may require facilities such as roads in areas involving unusually high construction costs. This could lead to a net negative fiscal impact in spite of relatively high per capita tax revenues."

2. "The conclusion that there may be net fiscal benefits does not imply that there are no uncompensated costs of development."

3. "While there may be a net fiscal benefit on a statewide basis, there could still be serious localized fiscal problems if development were concentrated in a small community."

Because of rather serious methodological errors, the results of the analysis - for any states except those for which the assumptions were developed - must be suspect. To the extent that Working Paper #6 has been accepted in any policy arena which encompasses all coastal states - producing and frontier - faulty conclusions may have been reached.

Texas does not face simply a cash-flow problem in which revenues from OCS activities will eventually supercede related costs. Rather, Texas coastal communities could face an ongoing fiscal drain. The fact that such could be the case in Texas - and perhaps other states as well - raises the question of the ameliorative effects of existing federal programs, excluding the CEIP.

IV. The Role of Federal Transfer Funds

Like other states, Texas receives federal aid from numerous programs. The aims of these programs and their efficiency in achieving those aims are extremely diverse. In aggregate, the amounts are substantial. In FY 1975, for example, federal agency funds spent in the various states totaled approximately \$327 billion. Texas received \$16.2 billion, or 5 percent, of which \$3 billion were in grants (Federal Outlays in Texas). Because of the sums involved, the effects of such federal program efforts become important in a consideration of the fiscal impact of future federal action on state and local governments.

The question in the context of this study can thus be stated: is sufficient aid available from existing federal programs to compensate the state and local governments for deficits incurred as a result of development of the Federal OCS? In principle, a complete answer to this question would require an examination of any program in which allocations to state and local governments have changed as a result of the onshore effects of offshore development. This is an incremental approach whereby each program is analyzed to estimate changes in outlays to each government unit.

Government units are affected by OCS development through increased tax revenues as a result of rising income and employment and an expanded tax base, and through increased demand for public goods and services due to an expanded population. Therefore, the amount received by an OCS-impacted government from any program which uses income, tax revenue, employment, or population as a factor in allocating funds will change.

Unfortunately, information on federal grants classified according to the various grant characteristics is not regularly published. Further, even if the information were readily available, there are over 1000 federal grant programs, each of which might need careful analysis to project the net change in transfer funds to state and local governments induced by the development of the federal OCS. One study, for example, identified 120 formula grant-in-aid programs which use population as a factor (Federal Formula Grant-In-Aid Programs That Use Population As A Factor In Allocating Funds).

Additionally, while the effects on the finances of local governments are of particular interest, the analysis is complicated by the fact that much federal aid flows to local governments through the state government. For instance, in Texas all highway and most education funds are channeled through state agencies.

In short, a complete analysis in which every pertinent federal program is examined could conceivably be made; however, the required investment in time and resources places such an undertaking beyond the scope of this study.

Perhaps the most important grant program to state and local governments is the general revenue-sharing program, otherwise known as Fiscal Assistance to State and Local Governments. The \$293,239,000 received by Texas in FY 1975, for example, represents 10 percent of total federal grants to the State. This section examines the program to provide an example of the type of analysis which would be required to determine the impact of OCS-related growth on federal aid to local and county governments. The allocation formulae are briefly described and a simplified method whereby one may estimate the impact of increased population on revenue-sharing grants to local governments is presented. While the results are only estimates, one can at least get a feel for the impact. The approach could also be used as a guide for similar analyses of the impact of changes in tax revenues and personal income on fiscal assistance.

Revenue-sharing money filters down to local governments as part of a multi-stage allocation process:

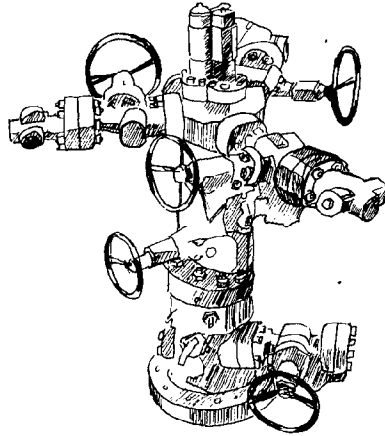
1. The total appropriation is allocated among states on the basis of either a "three factor formula" or a "five factor formula." The three factors are population, general tax effort, and relative income; the five factors are population, urbanized population, population inversely weighted for per capita income, income tax collections and general tax effort. The formula used for a particular state is the one providing the greater amount.
2. One-third of the amount allocated to a state is given to the state government, and two-thirds to county and local governments. (This is the most understandable provision, by far.)
3. The two-thirds of the state's allocation going to county and local governments is divided among counties so that the percentage received by each county is equal to the ratio of that county's population times general tax effort times relative income to the sum of that product for all counties in the State.
4. Within a county, the funds are then divided between the county government and local government. The percentage of county's funds received by the county government is equal to the ratio of the county government's adjusted taxes to total adjusted taxes of the county and local governments.

5. The remainder of the funds allocated to a county area after the county government gets its share is divided among local government units. The percentage due each local government is the ratio of that unit's population times general tax effort times relative income to the sum of the products for all local government units.

Special provisions such as those pertaining to township governments, Indian tribes and Alaskan native villages are not included in the above discussion.

Since funds on all levels are allocated according to ratios, changes in population, personal income and tax revenue of other government units in the county, in all counties in the state, and in all states will influence the size of the grant received by a given local government. If, for example, a city experiences an increase in population, income, and tax revenue relative to other units of government in the county, and that county grows relative to other counties in the state, and that state grows relative to other states, then that city's relative share of total funds allocated should increase. However, it is also possible that the city's share might not increase or might in fact decrease if growth in the county or state is less than other areas in the state or nation. In other words, the complexity of the allocation process and the reliance on relative measures makes invalid the a priori assumption that revenue-sharing funds will automatically increase if a community experiences growth due to OCS development.





Several simplifying assumptions were made in developing the following methods whereby the effect of a change in a local government's population was estimated:

1. Changes in the local government unit's population will not change the state's total share of revenue-sharing funds. That is, it is assumed that population increases/decreases in other areas of the state and nation will offset the municipality's population changes such that the state's total share is unaffected.
2. Likewise, the county's share of total state funds allocated to county and local governments is assumed to be given.

The percentage of the amount going to local government units in a county due one local government is equal to the ratio of that unit's population times the general tax effort times the relative income to the sum of the products for all local governments.

Let S = local governments' share of all county monies
 L = grant of a particular local government
 P = population
 T = tax effort factor. This is the ratio of a local government's adjusted taxes to revenue received from all sources including but not limited to taxes.

R = relative income factor. This is the ratio of per capita personal income of the entire county to the per capita personal income of the municipality
n = number of local government units
subscript c = county

The revenue grant to the nth municipality is:

$$L_n = S \frac{P_n T_n R_n}{\sum_{i=1}^n (P_i T_i R_i)} \quad (1).$$

To determine the effect of a community's change in population, one may take the partial derivative of equation (1) with respect to population. The following direct relationship between population and revenue-sharing funding emerges:

$$\frac{\delta L_n}{\delta P_n} = \frac{S T_n R_n \left(2 \frac{P_n}{P_c} \right) \sum_{i=1}^{n-1} (P_i T_i R_i)}{\sum_{i=1}^n (P_i T_i R_i)^2} \quad (2).$$

Translated, this means that for every increase (decrease) in population of one person, the grant received will increase (decrease) by this amount:

$$\frac{\left(\begin{array}{l} \text{Local government's} \\ \text{share of county funds} \end{array} \right) \left(\begin{array}{l} \text{City's tax} \\ \text{effort factor} \end{array} \right) \left(\begin{array}{l} \text{City's relative} \\ \text{income factor} \end{array} \right) \left(2 - \frac{\text{City's population}}{\text{County's population}} \right) \left(\begin{array}{l} \text{Three factor products} \\ \text{summed for all} \\ \text{other local governments} \end{array} \right)}{\left(\begin{array}{l} \text{Sum of three factor products} \\ \text{for all local governments in county} \end{array} \right)^2}$$

For example, assume the following for a local government (n):

S = total monies going to local governments = \$20 million
Tn = tax effort factor of a local government = 0.9. In other words, the city receives 90 percent of its revenue from all sources as tax revenue.
Rn = relative income factor = 1.1. In this case, the per capita income for the county as a whole is larger than that of this city.

$P_n = 20,000$ = municipality's population
 $P_c = 150,000$ = total population in county
 Sum of products for all municipalities = 198,000.

The city's initial share of \$20 million can be estimated using equation (1).

$$\begin{aligned}
 L_n &= \$20 \text{ million} \left(\frac{20,000 \times 0.9 \times 1.1}{198,000} \right) \\
 &= \$20 \text{ million} (10\%) \\
 &= \$2 \text{ million}
 \end{aligned}$$

The increase in revenue-sharing money due to each new resident is calculated by using equation (2).

$$\begin{aligned}
 \frac{\delta L_n}{\delta P_n} &= \frac{(\$20,000,000) (0.9) (1.1) \left(2 - \frac{20,000}{150,000}\right) (178,200)}{(198,000)^2} \\
 &= \$168.00
 \end{aligned}$$

Population for all levels of government is determined on the same basis as resident population as determined by the Census Bureau for general statistical purposes. Practically speaking, this means that data except on local population is updated annually. Estimates of local population in 1973 were used in deriving the current entitlements for local governments. For the period beginning October 1, 1977, entitlements will be based on estimates of local population in 1975.

In other words, population increases are not immediately reflected in increased grants on the local level. Rather, several years may elapse before local population changes are reflected in the data used to distribute county area funds. Municipalities now are receiving grants based on 1973 population patterns. This lag works to the detriment of those areas which are experiencing sudden increases in population, while benefiting areas which are rapidly losing population.

The general revenue-sharing program was examined because it is the major grant-in-aid program received by government units at all levels. There are many other programs providing direct aid to local governments which use factors other than or in addition to population in allocating funds. Examples include the Comprehensive Employment and Training Act (CETA) and the Community Loan and Housing Development Block Grant program. Factors used for Title I of CETA, for instance, are the relative number of unemployed, the proportion of low-income families, and previous funding levels. Factors utilized in the HUD program are population, poverty, and housing overcrowding. Since OCS-related economic impacts include increased employment and income, communities might very well receive less from programs in which funds are allocated on the basis of unemployment or poverty.

In summary, the general revenue-sharing program was examined to determine the impact that population changes might have on funds received by local governments. As such, it provides an example of the type of analysis which would have to be undertaken on a much broader scale to provide a complete answer to the question of the impact of OCS-related development on transfer funds received by government units.

The net impact on each community can only be determined by considering each program, a Herculean task at best. In general, though, increased grants from programs using population, tax revenues, income and employment as positive factors may be expected. Conversely, decreased grants may be expected from programs considering unemployment and poverty in allocating funds.

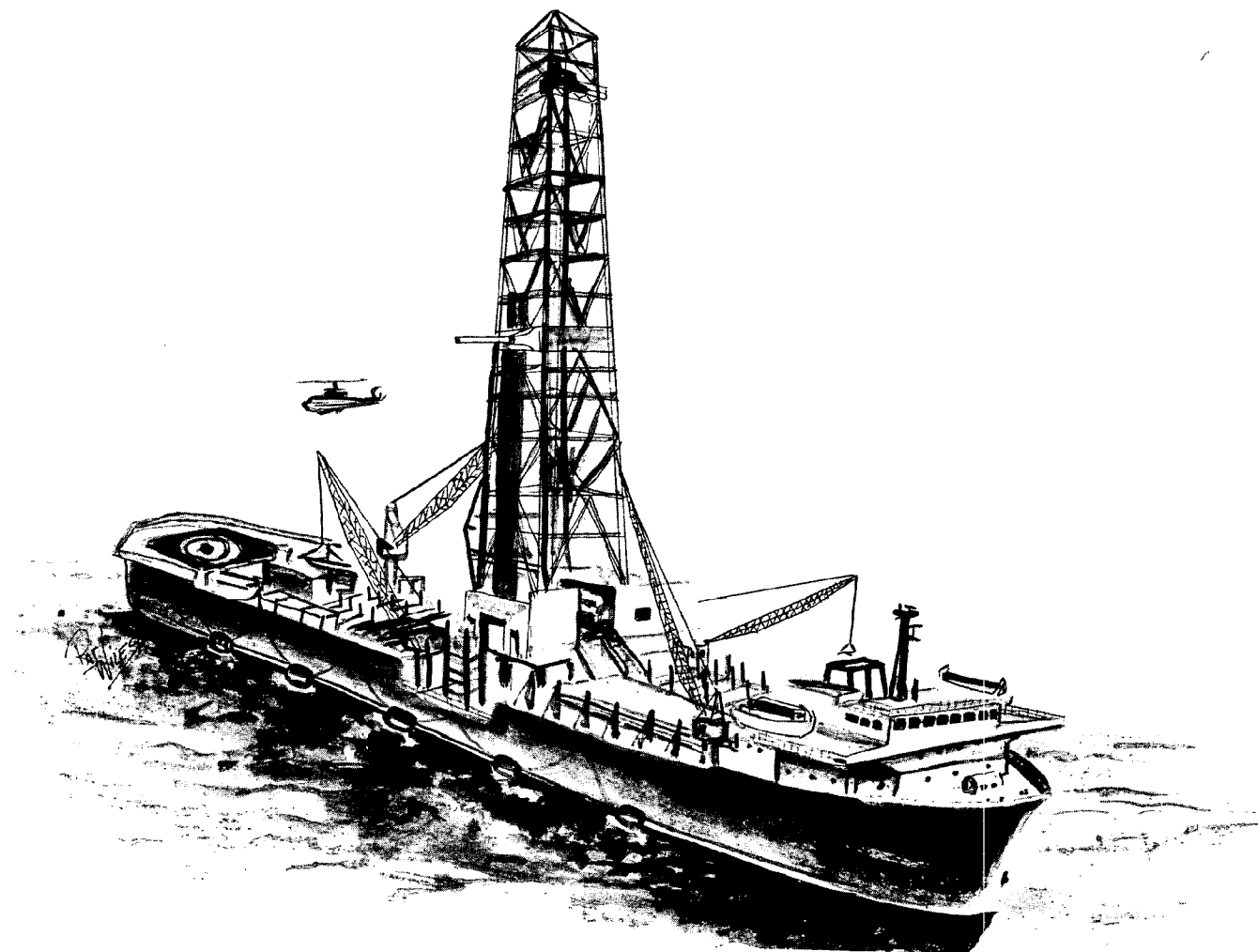
There are lags between the time when a change in a factor occurs and when that change is reflected in the data used as a basis for dispensing monies. In the revenue-sharing program, for example, 1973 local population patterns are used as a basis for allocating funds to local governments. Thus, while theoretically a community should receive increased funds which could be used to alleviate OCS-related developmental impacts, in actuality, time lags in adjusting the allocation basis may delay commencement of higher funding levels. This problem would be especially severe for small communities experiencing rapid growth, for whom timely receipt of the funds is particularly crucial.

In short, the assumption that revenue sharing has built-in amelioration for rapid increases in population is faulty in at least two ways:

1. The complexity of the allocation process and its use of relative measures mean that population increases may not be accurately translated into increased revenue sharing funds. In fact, population increases, under certain conditions, could result in less revenue sharing funds.

2. The use of population data which is two or more years old means that population increases may not be immediately translated into increased revenue sharing funds.

Similar conclusions may apply to other federal programs which rely on such formulation for allocation of funds.



7. MAJOR POLICY VARIABLES

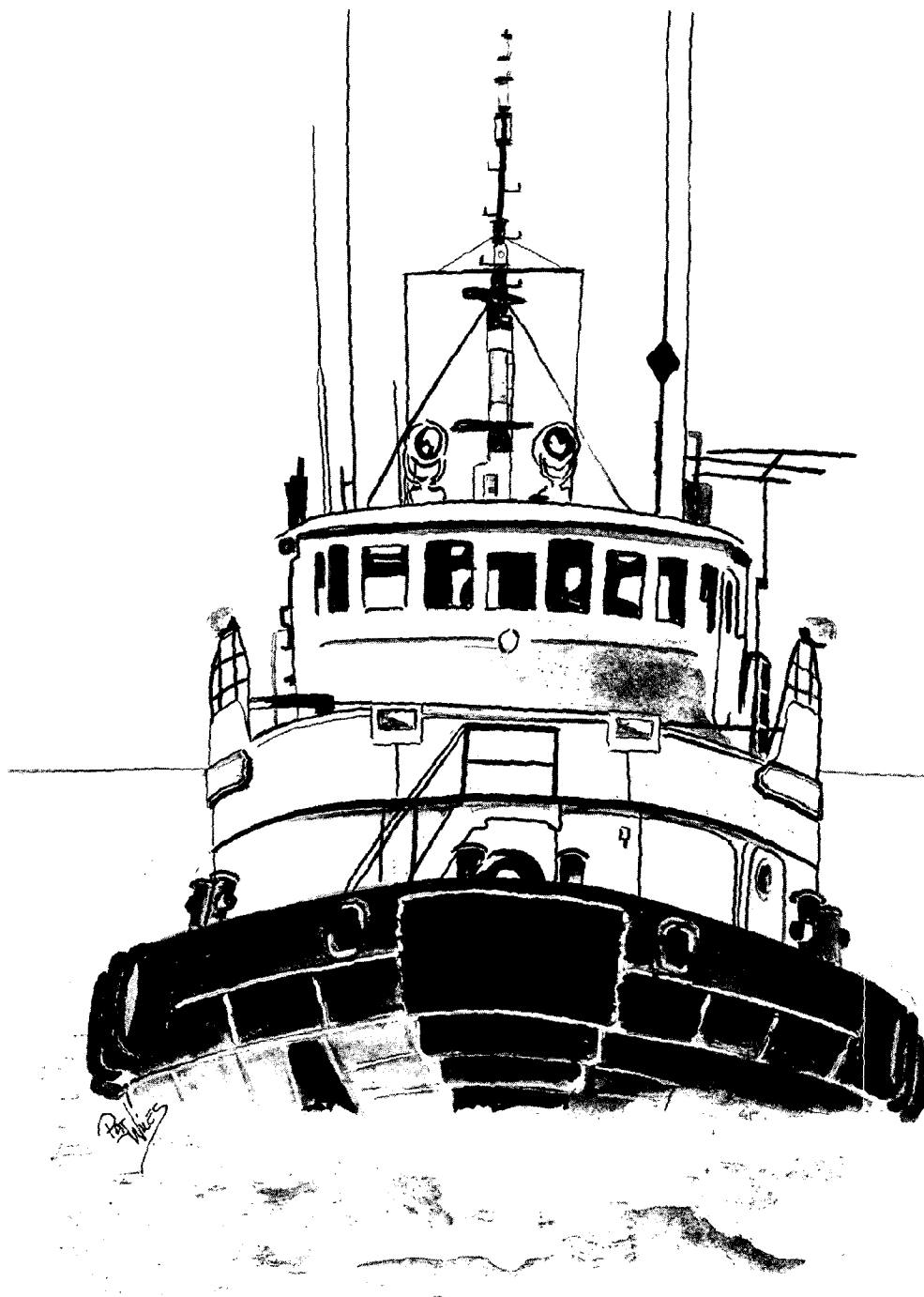
There are clearly policy changes which, if enacted, could drastically alter the extent and timing of leasing, the rate of exploration, and the production schedules assumed in this study. Those policy variables are relatively major changes and are, therefore, not assumed here. Instead, "business as usual" in the existing policy framework is the basic assumption. This report, then, analyzes the nearshore and onshore impacts of oil and gas development in the Texas Federal OCS when major policy variables are held constant. The determination of the effects on OCS development (and thus, impacts) of major policy changes is potentially a project at least as time-consuming as this one, and one which would have a completely different purpose.

However, without analyzing the affects of such policy changes and without any statement concerning their liklehood or preferability, it is helpful to cite some of these major policy changes.

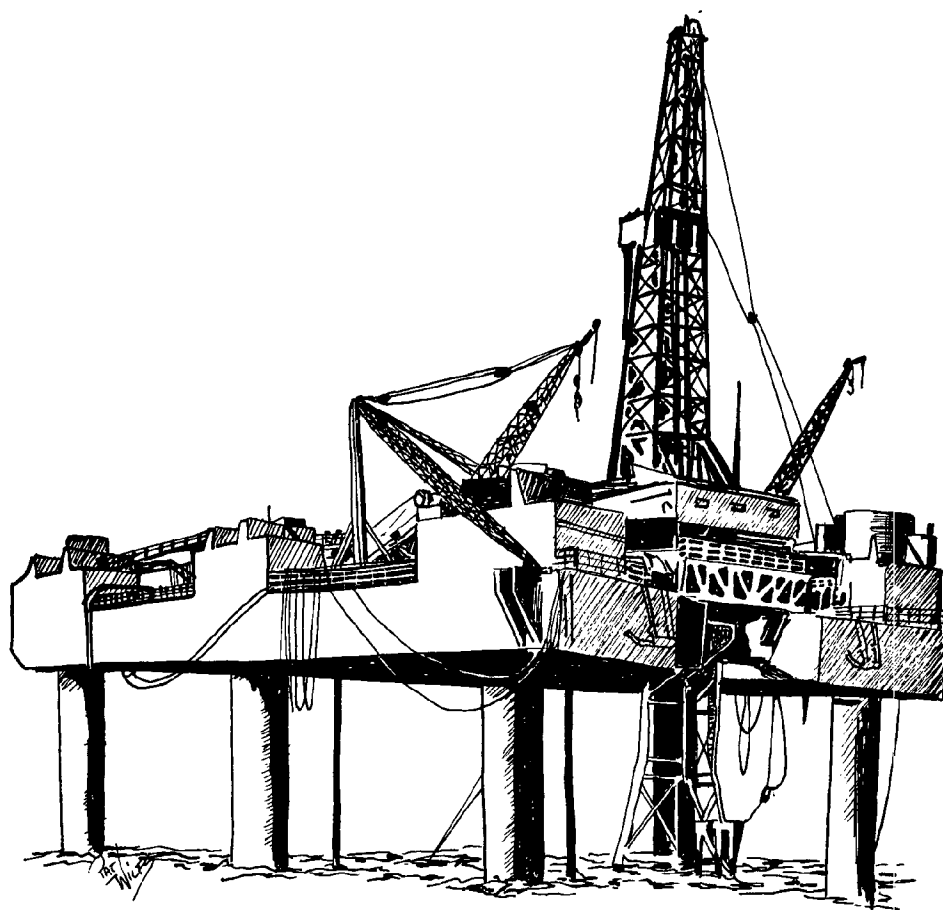
It seems likely that any of the following actions could have an effect on OCS development schedules and thus any resultant impact:

1. Deregulation of interstate natural gas prices;
2. A slow-down or an acceleration, in comparison to recent years, of OCS leasing by the Bureau of Land Management;
3. Stricter or looser environmental regulations;
4. Modification of the existing federal/state/local relationships regarding acceptance of development plans;
5. An oil embargo or price change;
6. Modification of the existing environmental impact statement processes;
7. Change in the rate of development of alternate energy sources;
8. Significant fluctuations in demand; and
9. Modification of existing, onshore land use policies.

Any such list, of course, would probably never be comprehensive and could be open to expansion immediately as the policy world changes. The important point, however, is that there are many major policy variables which could have immediate and significant affects on any set of OCS development assumptions.



In general, major policy changes are likely to primarily affect the location of development or the rate of development. Depending on the policy mix, location of development could conceivable range from merely ongoing activities in already developed areas, to extensive development in "frontier" areas. Rate of development could range from rapid expansions to a slow-down or even a shut-down. These location and rate variables, needless to say, will dramatically affect the nature and extent of near-shore and onshore impacts.



8. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusions which are supported by the research conducted during this project can be stated as follows:

1. No refinery construction or expansion, gas processing plant construction, tank farm construction, expansion of the platform construction sector or mobile rig construction sector, nor petrochemical plant construction can be expected in Texas in the foreseeable future due to Texas Federal OCS oil and gas production in and of itself.
2. Given the conclusion stated above, the most pronounced effect of OCS development on the State of Texas will be fiscal deficits for local affected governments.
3. Environmental effects of OCS oil and gas development, in the absence of refinery, gas plant, or other major onshore developments, are likely to be limited to marginal increases in air and water pollutants, intensification of commercial, industrial, and residential land developments, and short-term effects of pipeline laying.
4. Sociocultural impacts are likely to be minimal in populous, economically diverse areas which have had extensive experience with OCS oil and gas development and possess a developed legal/institutional structure. To the extent that an impact area is less populous, has a simpler economy, has limited experience with OCS development, or has limited legal/institutional capabilities, sociocultural impacts are likely to be more pronounced.

A special study of the sociocultural impacts of OCS development on one small coastal community was completed, and while it is difficult to draw wide-ranging conclusions from that one study, the analysis did reveal that:

- a. There is in the community a great deal of unawareness of the extent and kind of community growth that OCS oil and gas development could bring.
- b. The community's residents tend to more strongly oppose an increase in temporary population than an increase in permanent population. That is, the new residents' sense of loyalty to the community is an important sociocultural impact variable.

- c. Although long-time residents express a concern over the perceived growing impersonalization of the community, new, full-time residents have been accepted.
 - d. New residents have, to a certain extent, formed a sub-group of their own.
5. It is virtually impossible to predict with any degree of accuracy what the State and local impacts of all future Texas Federal OCS oil and gas development are likely to be. Any answer to the question of impacts must be expressed in terms of the impacts on a rather specific coastal area from one sale, a set of sales, a given number of tracts, a given amount of production, or some other indicator of a specific level of activity.
 6. There are obvious needs for more extensive and centralized information on existing facilities, both offshore and onshore; on offshore reserves; on the location, magnitude, resource requirements, and timing of exploration and development; and on previous or ongoing impacts. In some cases, such information is proprietary; in some cases, no concentrated research efforts have been made. Though there are great information needs, there is also a wealth of information available in public sources. Virtually this entire report was built around data which is available to any researcher. That data, however, is scattered among literally hundreds of sources. There are, as yet, no central clearinghouses of OCS information readily accessible by local decision makers.
 7. The State of Texas, while justifiably considered in many quarters to be an OCS "producing State", is sufficiently large and diverse as to defy such general description. There are, of course, parts of the Texas Gulf Coast which have long and extensive experience with the onshore activities associated with OCS oil and gas development. Such areas include Houston, Galveston, Beaumont, Port Arthur, Orange, and adjacent areas. To some extent, Corpus Christi and the surrounding area fit into the same category.

There are, on the other hand, those parts of the Texas coast which have had little or no experience with OCS oil and gas activities. Most of the Middle Bay area (Matagorda, Jackson, Victoria, Calhoun, Aransas, and Refugio Counties as well as, to some extent, Brazoria County) belongs in this category as does the Lower Rio Grande Valley. These areas' relative lack of OCS experience makes them more like "frontier" areas than traditional "producing" areas.

This differentiation of Texas coastal areas is important not only in the process of calculating impacts but also in formulating policy addressed at ameliorating any adverse impacts.

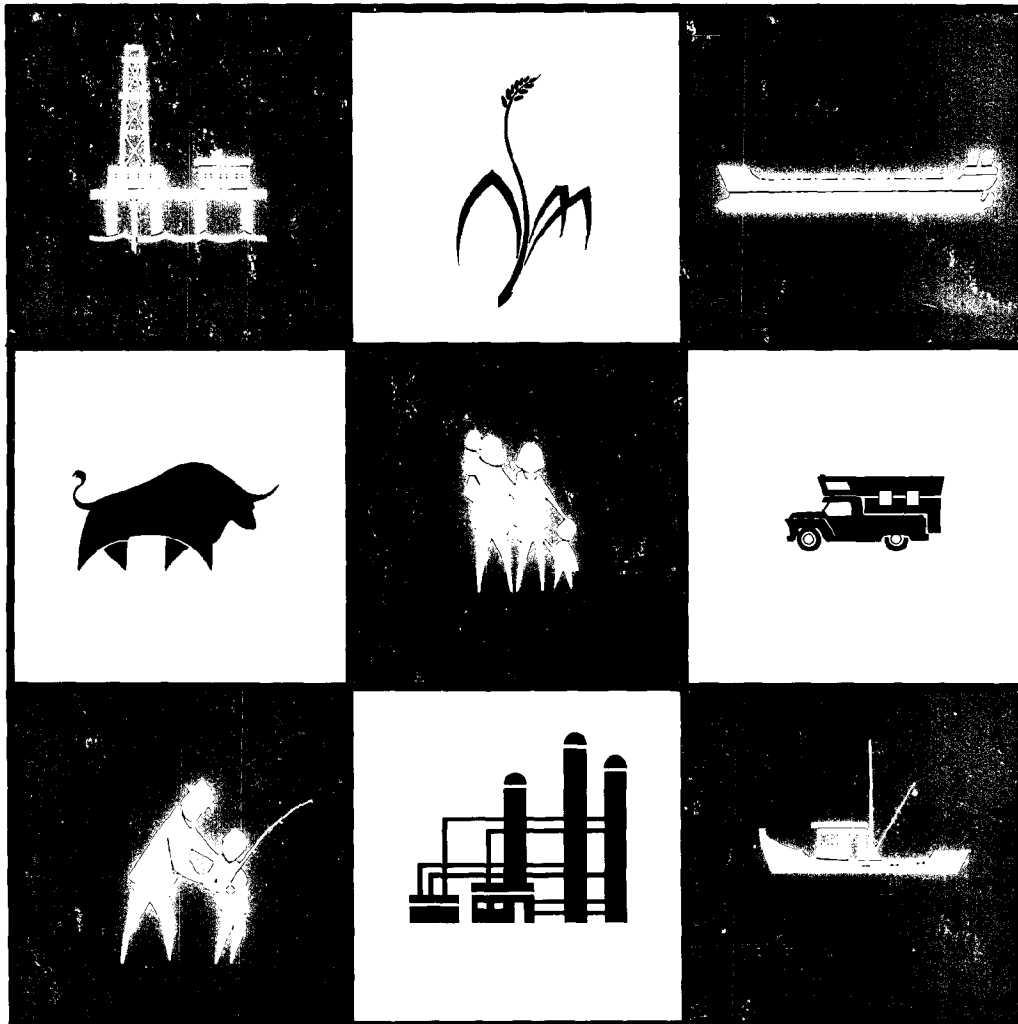
8. The history of Texas' onshore developments related to offshore oil and gas activities is characterized by many private investment decisions to which public bodies react. Regardless of how that history may differ from other kinds of development or other states, and in the absence of any judgement as to whether such a system is optimal, the fact that public bodies can often be placed in reactive positions makes ever more pressing the need for accurate information concerning planned activities, realistic assessments of potential impacts, and timely information regarding ameliorative techniques.

Recommendations

1. The fact that sociocultural impacts in many cases are difficult to project or are expected to be minimal should not be taken to mean that no such impacts could ever occur. Policy makers should be constantly aware of changing perceptions of the quality of life or of sociocultural values in the affected coastal sites.
2. Since fiscal effects are likely to be pronounced in some local, affected sites, the process of projecting such effects is extremely important.
 - a. Data which is specific to the affected site in question - not statewide or nationwide data - should be used to the greatest extent possible. Employment/population ratios, per capita government expenditures data, tax revenue figures and other data points derived from areas other than the impact area in question can result in highly misleading conclusions.
 - b. The processes of impact assessment developed in this report are recommended for use by Texas coastal communities using site-specific data.
3. Each coastal locality, county, and council of governments should make an effort to periodically review any literature which provides indications of current or prospective oil and activity offshore in their area. Among such sources are lease sale schedules, tract nominations, and environmental statements released by the Bureau of Land Management, U.S. Department of Interior; industry publications;

Texas Railroad Commission publications detailing offshore production; relevant publications of the United States Geological Survey; and any other mechanisms which may in the future be established by the State or Federal government to disseminate such information. (A complete listing of relevant documents reviewed during the course of this study can be found in Appendix J, Volume IV.)

4. Affected coastal communities are encouraged to take full advantage of CEIP funds and to work closely with the State agency designated to be responsible for intrastate allocations of such funds.



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